

REPORT

ON

THE EXCAVATIONS AT NASIK AND JORWE

1950-51

Deccan College Monograph Series: No. 13

Report

on

The Excavations at Nasik and Jorwe

1950-51

by

H. D. Sankalia

and

S. B. Deo

With Topical Contributions by

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DECCAN COLLEGE
Postgraduate & Research Institute
POONA

REPORT

ON

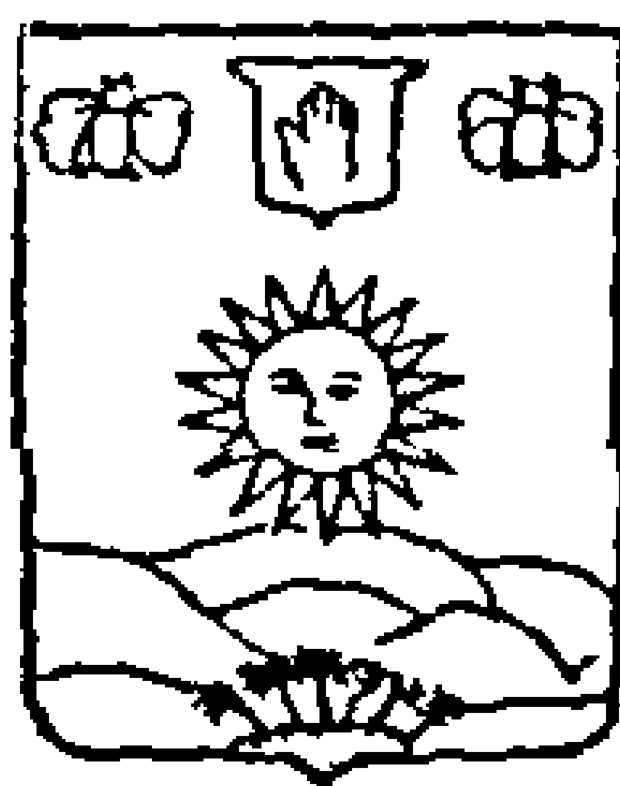
THE EXCAVATIONS AT NASIK AND JORWE 1950-51

by

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M.A., LL.B., Ph.D (London)

and

Shantaram Bhalchandra Deo
M.A., Ph.D



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To

Sati Godavari Mata

of

Sakuri

FOREWORD

It was said by a famous archaeologist that the British people, in their desire to prove the antiquity of London, had to dig up its past. That was the only way of proving London's antiquity, despite literary evidence to that effect. The same is true of many sites in India. Literary or traditional evidence of a sort does exist, but it is not reliable from a strictly scientific point of view and it does not picture the past as vividly and faithfully as the discovery of ancient ruins will do.

It was with this view that the University of Poona, very soon after its inception, came forward to help the Deccan College to organise excavations at Nasik under its auspices. The help was not much, but it has gone to prove that not only Nasik is one of the most ancient sites in Maharashtra, but the entire Godavari valley was the scene of cultural activities during the proto-historical period. This, however, is only a beginning. The clues supplied by Nasik have to be followed up with a view to knowing the full extent of the culture of the Godavari Valley and the life of the early settlers there. With this end in view, the University is assisting another small excavation at Nevasa this season. It is hoped that it will throw more light upon the culture of the early inhabitants of the Godavari Valley.

M. R. Jayakar

INTRODUCTION

The excavations at Nasik and Jorwe were conducted by the Deccan College Research Institute under the auspices of the University of Poona Not only the Institute but scholars—Indian and foreign—interested in the evolution of past cultures should, indeed, feel grateful to this young University for taking such deep interest in field archaeology, and encouraging it by small but regular grants since 1950 These alone have enabled me to continue work on the project and undertake further explorations in the Godavari Valley

Besides confirming in a number of details the character of the Early Historic Culture in Maharashtra, as previously known from the Institute's work at Kolhapur, Nasik has provided positive and reliable evidence for the existence of at least two cultures—one pre historic, the other proto historic,—which were hitherto quite unknown, and from the nature of the terrain presumed not to have existed in this part of India With the clues supplied by Nasik and Jorwe, one can look forward to a systematic and large scale investigation of the extent and full significance of these cul tures In the opinion of Sir Mortimer WHEELER, both Kolhapur and Nasik need an extended excavation This, the Institute hopes to undertake when larger funds are available

The present work lasted from November 27, 1950 to February 20, 1951 Besides conducting the excavations, the regions in and around Nasik as well as Jorwe were systematically explored The work was carried out in collaboration with my former colleague and Curator of the Museum, Dr M G DIKSHIT, my pupil assistants Dr S B DEO and Shri Zainuddin ANSARI Dr DIKSHIT was in charge of pottery and he was to contribute the chapter on it, as well as those on beads and coins But later he joined the University of Saugar So, on my return from Europe, I undertook to write on pottery and coins also Dr DEO directly supervised the work of excavation in the main trench He has, therefore, prepared under my guidance the section on stratigraphy, besides those on beads and objects of iron, stone, terracotta, glass and shell Shaikh Zainuddin ANSARI was in charge of drawings and photography and also helped in the supervision of digging The contour plan of the main mound was made by him under the guidance of Shri G G VAIDYA I am extremely thankful to the latter for his help Dr A V NAIK, one of my former pupils, and now the Secretary, Extra-Mural Department, University of Poona, has contri buted the section on Jorwe pottery, and a junior pupil, Shri K D BANERJI, on the extra-ordinarily large collection of bone points

For the identification and contribution of reports on some of the excavated objects such as bone points, bones, shells, wood, glass, bronze celts, inscribed potsherds, and Muslim coins, grateful thanks are rendered to

Dr. F. E. Zeuner,	Professor, Environmental Archaeology, University of London,
Dr. D. D. Karve,	Principal, Fergusson College, Poona,
Dr. J. C. George,	Reader and Head of the Department of Zoology, the M. S. University of Baroda, Baroda,
Dr. S. L. Hora,	Director, Zoological Survey of India, Calcutta,
Shri K. A. Chowdhury,	Wood Technologist, Government of India, Dehra Dun,
Dr. B. B. Lal,[1]	Archaeological Chemist, Government of India, Dehra Dun,
Shri B. R. Pathak and Shri M. K. Madhekar	Engineering College, Poona,
Dr. B. Ch. Chhabra,	Government Epigraphist for India, Ootacamund,
Shri R. G. Gyani and Shri V. A. Banavalkar	Curator and Archaeological Chemist respectively, Prince of Wales Museum, Bombay.

For granting permission to excavate at Nasik and making our stay on the burial ground comfortable, thanks are also due to

Shri A. Ghosh,	at present Director General of Archaeology in India,
Shri M. N. Deshpande,	at present Superintendent, Archaeological Department, Western Circle, Baroda,

The Collector, and

The Chief Superintendent of Police, Nasik,

Shri B. L. Patankar, Principal, H. P. T. College, Nasik,

Shri P. B. Aurangabadkar, Nasik,

Dr. Ramdas, Nasik,

1. Dr Lal's report is being published separately in the *Bulletin of the Deccan College Research Institute*, Vol XIV, No. 1, as his revised draft was not received when this was sent to the Press Copies of Dr. Lal's report, however, will be furnished along with the Excavation Report

Shri J P JOGLEKAR,	Retired Photographer, Archaeological Survey of India, for help in reconstruction of pottery,
Shri N A GORE,	Now Librarian, Bombay Branch of Royal Asiatic Society, Bombay,
Shri R D JOSHI,	Professor, Wadia College, Poona

A part of the expenses for printing this report was met by a subvention from the University of Poona So to the University I, once again, offer my thanks, as well as to Dr S M KATRE, the Director of the Institute, whose unfailing kindness and help have alone made the publication of the report possible

Lastly I must express my thanks to Dr M R JAYAKAR, the Vice Chancellor of the University of Poona, for writing a Foreword to this Report, at a very short notice It is our aim to fulfil the hopes expressed by him

H D SANKALIA

Thursday, 16th December 1954
Excavation Camp,
NEVASA

Postscript

At Nevasa (Dist Ahmadnagar), all the elements of the Nasik-Jorwe culture—Painted Pottery, and Microliths including lunates and obliquely blunted blades,—and a couple of Polished Stone Axes with Hammer Stones are found in a regular excavation at a depth of about 20 feet from the ground level, below the earliest occurrence of Black-and-Red Ware, Satavahana coins and floorings made with lime and reeds So there is no doubt about its relative stratigraphical position and probable date, which should be somewhere in the Late Chalcolithic or the Bronze Age

H D S (26-1-55)

The author acknowledges his indebtedness to the University of Bombay for the grant-in-aid received by him from the University towards the Cost of Publication of this work.

CONTENTS

PART I

Excavation at Nasik

TABLE OF CONTENTS

PART II

Excavation at Jorwe

PART I

ILLUSTRATIONS

Plans and Sections

Half tone Plates

List of Figures (Line Drawings)

Red Ware. Layer 5, Period IIA

Illustrations

List of Figures

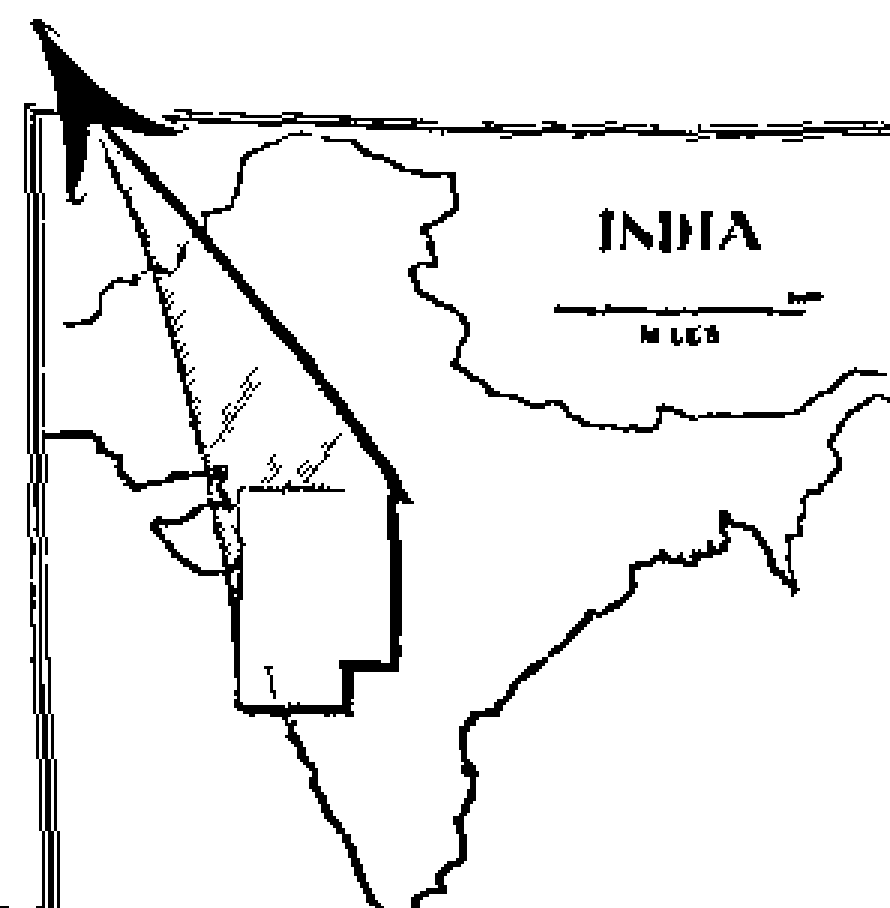
Frontispiece

MAP
SHOWING
THE DISTRIBUTION OF MICROLITHS AND PAINTED-POTTERY OF THE NASIK-JORWE TYPE IN THE GODAVARI RIVER SYSTEM.

MILES

R. SABARMATI
R. NARMADA
MAHESHWAR
NAVDATOLI
R. TAPI
CHANGDEV
PATAN
R. GIRNA
BAHAL
GANGAPUR
NIPHAD
NANDUR
MADHMESHWAR
NASIK
KOPARGAON
DHOKI
JORWE
PRAVARA SANGAM
SANGAMNER
R. PRAVARA
NEVASA
PAITHAN
AHMEDNAGAR
R. GODAVARI
BOMBAY
POONA
KOLHAPUR

INDEX
PALAEOLITHIC
MICROLITHS WITH CRESTED FLAKES
PAINTED POTTERY
EARLY HISTORIC
MODERN PLACES



I

SITE AND SUMMARY

Nāsik[1] (N lat 20°, E long 73° 51') is an ancient town, situated on both the banks of the Godāvarī This is one of the major rivers of the Deccan (Mahārāṣṭra) It rises in the Sahyādris (Western Ghāts), near Trimbak, about 20 miles south-west of Nasik, and flows a little south across the heart of India, meeting the Bay of Bengal in a broad, fan-shaped estuary, near Rajahmandry on the east coast Nasik town is also the head-quarters of the district of the same name This forms a part of the Maharastra unit within the State of Bombay

Antiquity

Literary, epigraphical and monumental evidence supplies almost an unbroken history of Nasik for nearly 2,500 years This pre-eminent position it held, probably because it lies on the best route between Central India and the west coast As the new archaeological data seems to suggest, this route might have followed the proto historic settlements springing up on the Godavari and its tributaries, the Pravara and the Girnā

The earliest well authenticated mention of Nasik is by Patañjali[2], a grammarian who lived in c 150 B C According to him, the town of Nasikya is referred to in the commentary (*Vārttika*) of Katyayana, another grammarian of about 250 200 B C, on an aphorism of Panini (between 600 B C–350 B C) That this town was in the Deccan (*dakṣiṇāpatha*) was known to several writers like Varaha-Mihira[3] (c 550 A D), and the authors of *Vāyu*[4] and *Varāha Purāṇas*[5], *Atharva pariśiṣṭa*, *Āvasyakacūrni*[6] (c 600 A D), and *Nandisūtra*[7] This list can be augmented if all the available literature is thoroughly ransacked Suffice here to note that early Hindu,

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1 For other details see *Gazetteer of the Bombay Presidency* (B G), Vol XVI (Nasik 1883) p 461 ff

2 *Patañjala Mahabhasya* published by Pandit NANDAKISHORE SHASTRI Adhyaya 6 p 585 (Banaras 1938) Panini *Astadhyayi* VI, 1 63 Varttika 3 See also MONIER WILLIAMS *Sanskrit English Dictionary* p 538

3 *Brhat Sañhita*, Adhyaya 14 p 89 Ed by H KERN in *Bibliotheca Indica* (Calcutta 1865)

4 PATIL D R, *Cultural History from the Vayu Purana* pp 270 309, (Poona, 1946)

5 MONIER WILLIAMS *op cit*

6 p 566 (Ratlam 1928)

7 p 88 (Satara 1942)

Jain and Buddhist (?) literature does record the existence of Nasik as a town and a country (*deśa* or *janapada*) in the Deccan.

The epigraphical evidence is almost equally old. One of the earliest inscriptions in the caves, now called Pāndu Lenā—but in the inscriptions the hill is called Tiranhu (Sk Triraśmī)[8],—about five miles south of Nasik, the latter is called a *nagara* (town)[9]. The townsmen are called Nāsikaka. Some of these, men and women, high and low—ministers, bankers, even a fisherman, vied with each other in contributing towards the excavation of caves not only at Nasik but in far off places like Kānheri, Bedsā and Bhārhut in Central India for the Buddhist Bhiksus and their maintenance No less zealous were the rulers,—be they foreigners Śakas, Yavanas or indigeneous—Sātavāhanas In fact from these inscriptions alone, one can picture the political, administrative, social, religious and economic conditions of the period between c 200 B.C–A D 300, when first the Sātavāhanas, then the Sakas, known as Ksaharāta Ksatrapas, under Nahapāna, again the Sātavāhanas and lastly the Ābhiras governed the country. Though the rulers changed in quick succession, the eclecticism of the time was such that Buddhism as well as Brahmanism continued to flourish, and the town also probably remained prosperous.

The exact condition and status of Nasik in the subsequent period (c 300 A D–770 A D) cannot be ascertained It is definite that it was comprised under the territories of the Traikūtakas, Kataccuris, and the Western Cālukyas[10]. The successors of the last, viz the Rastrakūtas, made Nasik once again the district headquarters (*visaya*)[11], or a still larger unit (*desa*)[12] This position it had to yield to Sinnar, a smaller town, 17 miles south-east of Nasik, when the former was made a capital by the early Yadavas[13].

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8 Dr Katre kindly pointed out that Triraśmi is not the correct Sanskrit form from Tiranhu, or *vice versa* But another inscription at Nasik (*E I* VIII, p 78) gives the Sanskritized form The true phonological equivalent would be Trirasnā One of the synonyms of the latter is Triraśmi

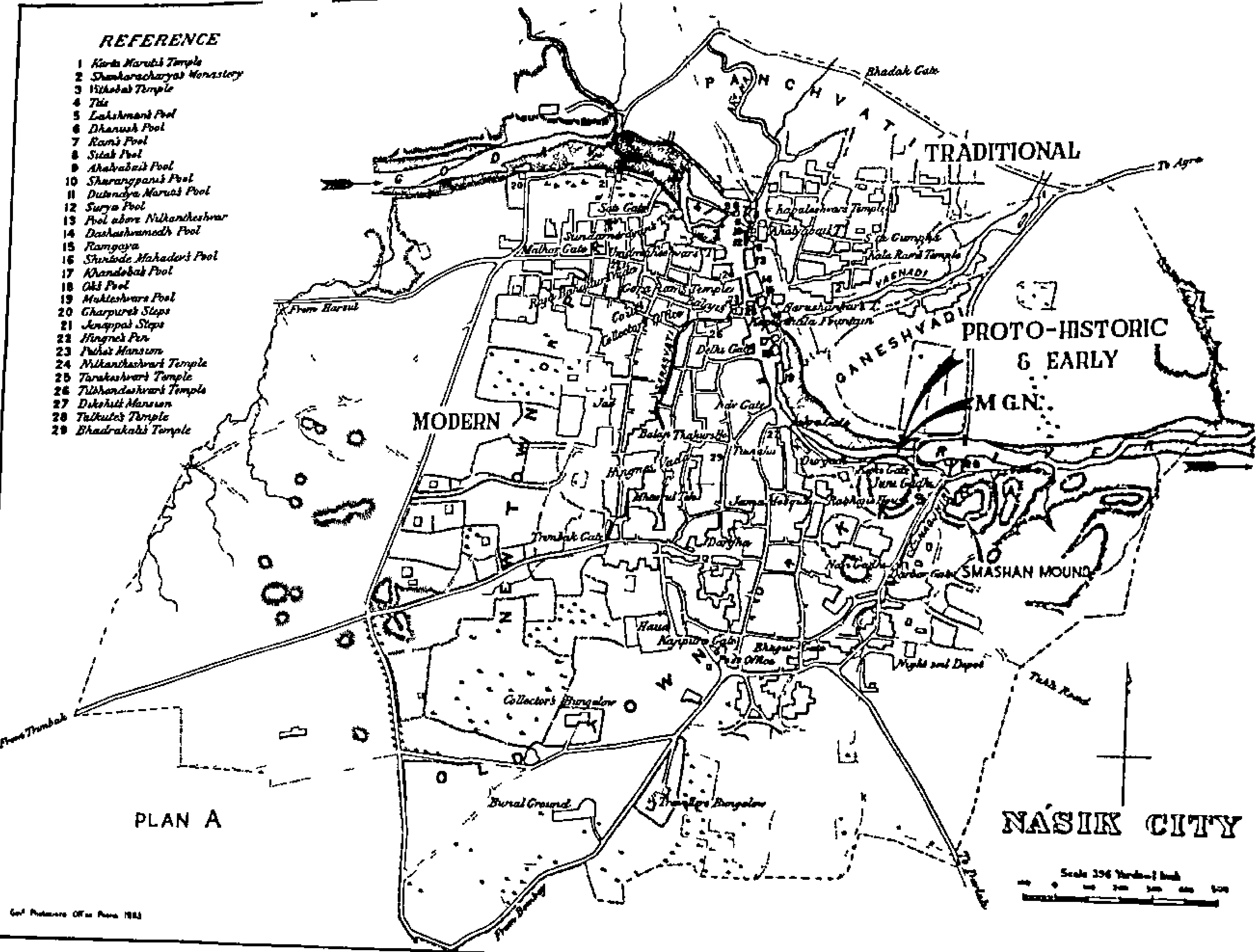
9 *E I*, VIII, p 93, Ins No 22, also Luders, H, *E I*, X, Appendix, Ins No 1126, p 124

10 See Sankalia, H D, *Archaeology of Gujarat*, pp 11 13 (Bombay, 1941)

11. Dhulia Copper plate grant of Govinda II, Saka 701 (A D 779), *E I*, VII, p 184

12 Wani Dindori Copper-plate grant of Govinda III, Saka 730 (A D. 806 7) *I A* II (1882), p 157.

13 Naik A V, *Archaeology of the Deccan* (in Ms form), p 149



Plan of Nasik showing its three Division

The town, and this part of the Deccan finally passed under the various Muslim rulers—the Delhi Governors (1312-47), the Bahmanis (1347-1487), the Nizāmshāhi of Ahmadnagar (1487-1637) and the Mughals (1637-1760), until the Marāṭhās fully and finally conquered it in c.1760. The former had fortified the old settlement, the scene of the excavation, and known since as Junī Gaḍhī.

Now began another period of prosperity for the town. Stone-paved *ghāts* (steps with landings) were built along the river banks, old temples were renovated, and new ones erected, while the Maratha Sardars (noblemen) constructed huge *vāḍās* (houses with large enclosures), in a totally different quarter of the town.

Inspite of its being an ancient town, lying on the highway, and the resort of Buddhists for several centuries, the Chinese travellers—Fa-hien, Hiuen-Tsiang, I-Tsing and others do not seem to have visited Nasik. So also the later Arab, Italian and Portuguese visitors who travelled through India towards the close of the Hindu and the beginning of the Muslim period. We have, therefore, to content ourselves with a solitary reference by Ptolemy.[14] This Graeco-Egyptian geographer mentions Nasik as situated to the east of the river Namados (Narmadā), having its latitude 170° N. and the longitude 114°E. This location is fairly correct, except that Nasik is to the south-east of the Narmadā, and its latitude 20°N.

Nasik is thus divisible into three parts :—

(i) Traditional ('Rāmāyana'), or the earliest Nasik, known as 'Pañcavatī'.[15] This is located exactly opposite the site of the excavation, but on the left or the east bank of the river. [See Plan A].

There is no mention of Nasik in the *Ramayana*. Evidently it cannot be, in view of the times it is supposed to refer to The epic, however, does refer to one Pancavati, close to the Godavari It was situated within the Dandaka forest, which also comprised or was adjacent to Janasthāna Here lived numerous Rākṣasas. The forest was full of trees, flowers, fruits, and beasts among

14 McCRINDLE's *Ancient India as described by Ptolemy.* Ed by Surendranath Majumdar SASTRI, pp 152, 157. (Calcutta, 1927).

15 *Srimad Vālmiki Rāmāyanam*, Aranyakanda, Sargas 12 30, pp 316 345 (Published by R Narayana Swami AIYAR, Madras, 1933) This edition is published with the help of 11 manuscripts, mostly South Indian A critical edition is under preparation at Baroda It would be, indeed, interesting to see what the latter has to say about the existence of Pancavati Professor G H BHATT, Director, Oriental Institute, Baroda very kindly made inquiries and informed me that Pancavati and the Godavari do appear in Gauḍa (Bengal) and in the north-west recensions (Mss) of the Rāmāyana

which the deer predominated. It was also the abode of a few sages who practised penance and performed Vedic sacrifices. At the advice of the sage Agastya[16] Rāma repaired to this region on the Godāvarī with Sītā and Lakṣmaṇa. There they built an *āśrama*. The struggle with the Rakṣasas began here, with Rāma killing 14,000 of them along with their leaders and ended with the destruction of their chief, Rāvaṇa.

(ii) Early and Mediaeval or "Muslim" Nasik, formerly called Gulshanābād (City of Roses), but now known as Juni Gadhi, and the site of the excavation. It is situated exactly on the right bank, and to the south of (i).

(iii) Modern or "Maratha" Nasik, lying to the north-west of (ii) and west of (i), forming the nucleus of the present town.

Previous attempts

Possessing so much evidence of its past history, the site of the ancient town, contemporary with the Buddhist caves, had escaped detection, though coins of Nahapāna and various Satavahana rulers had been occasionally found. Efforts were made, no doubt, by the earlier scholars to obtain its traces. The region near Govardhan, a village about 6 miles west of Nasik, (and noticed 12 times in 5 inscriptions) was carefully surveyed by PANDIT Bhagwanlal Indraji[17] and Henry COUSENS, (then Superintendent of the Archaeological Survey, Western Circle, Poona).[18] The former succeeded in laying bare what appears to be a pre-historic (?) urn-burial, within a stone circle, covered by an earthen mound, about 26 feet in height. The latter was not so successful. As the Deccan trap appears on the surface, leaving a thin layer of soil, and as the town had passed through several building phases, COUSENS did not expect to find a high artificial mound, except a *stupa*. Even this he could not get. So no further attempts were made to search for early Nasik.

Discovery of the site

Its discovery, some 40 years later, is solely due to the advance in scientific archaeology. In 1948, sherds of a fine black, and black-and-red

16 Agastya's previous history of this forest is interesting from the point of view of the past climate. He says that the region was abandoned by man and beasts and deforested because for a long time there was no rain. When he crossed the Vindhyas and went south he got the conditions changed. This description, however fantastic and describing events of which man cannot have memory, surprisingly applies to the wet, dry and wet phases indicated by natural stratigraphy revealed at Gangawādi and Nasik. See p. 8 below.

17 *B G op cit* p 534-40

18 COUSENS Henry in *Progress Report A S I W C for 1908* p 29

PLATE I



Panoramic view of the Match (JUNI) Gadhi (Mound) from the Pancavati (northern) side, Nasik

(See p.)

(a) View of the MGN mound from SE, showing the black soil layer (*See p. 5*)

(b) View of the same mound from SW (*See p. 5*)

ware, as well as of a lustrous black ware, known as the N B P, were shown to one of us[19] These were collected from a mound, known as Junī (old), or Mātīchī (earthen) Gadhī (fort) This is situated almost on the eastern outskirts of the modern town, adjoining the Hindu cremation and Lingāyat burial ground [See Plans A and B]

The mound is nearly 100 feet high It is about 800 feet in length and 400 feet in breadth On the north it is bounded by the Godavari, on the south by the Kumbhārwadā road, and the locality of the same name, by the Agra Road, and a stream and drainage, called Nāgjhari on the east, and the Gādge Buvā's Dharmaśālā on the west [pls I, II] Except for a small portion in the centre and towards the west, the mound is very uneven The northern side overlooking the river presents almost a vertical section, wherein the natural and artificial layers are clearly visible The western, southern and the eastern faces are comparatively less steep, but of these the last is well graded From the river level the surface rises up southwards, and since this has been cut by the Agra Road and the streamlet, the sides of the mounds are exposed Sections of these reveal thick layers of fine gravel and silt capping the older cemented gravel and the bed rock These indicate that once the Godavari flowed in a still southerly direction, its limit on this side being the Kumbharwada, or the Navī Gadhi [See Section C] This was, of course, in the much distant past Later the river shifted its course northwards, cut out the aggradation deposits and began to flow nearly 65 to 70 feet below its previous level On the abandoned terrace developed a five to six feet layer of black soil This is very well seen on the south-eastern face of the mound [See pl IIa]

The remaining 20 to 25 feet are taken up by man-made debris Its thickness is not uniform The deposits are comparatively thin where earth grabbers have removed a considerable portion of the earth But there is no doubt that once the early habitation extended right upto and including the entire area of the Gadge Buva's Dharmasala on the west, that of the Kumbharwada on the south, and northwards beyond the present cliff River action is partly responsible for its destruction on this side

Besides a dilapidated mosque on the western end, and a number of ring or brick-lined wells jutting out from within the eastern and southern sides of the mound, a line of irregular and discontinuous buried rubble stone-

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19 Who collected these sherds is not known to me My attention was drawn by Shri M N DESHPANDE then Assistant Superintendent, Arch Deptt, Western Circle, Poona

walls was also seen on the eastern side The small and big gullies and the slopes were strewn with all sorts of potsherds, conch shell bangles, occasional coins and beads The most striking among these surface indications was a thick layer of bone points, numbering over 10,000 on the northern slope of Kumbharwada Mound [See pl IIIC]

Though the mound appeared disturbed by earth-grabbers, and building activity during the Muslim period, it seemed, that this affected only the top layers The earlier habitation layers resting on the natural ones seemed to be untouched

Aim of Excavation

From the nature of the pottery as well as other finds and the thickness of debris, we were encouraged to attempt a vertical excavation For here was a chance to lay bare a section of the ruins of the ancient town which had hitherto escaped detection The occurrence of the Northern Black Polished Pottery (N B P), so far south, also gave the hope that we might succeed in unearthing the traces of a culture contemporary with the earliest literary and epigraphical references For, this distinctive pottery, native to the Ganga-Yamuna doab, seems now to have originated at least in the 4th 5th century B C Looking to the traditional antiquity of Nasik, there was also a lurking hope that a careful excavation of the lowest strata might yield clues of a still earlier—pre—or proto historic—culture or cultures

Summary of Results

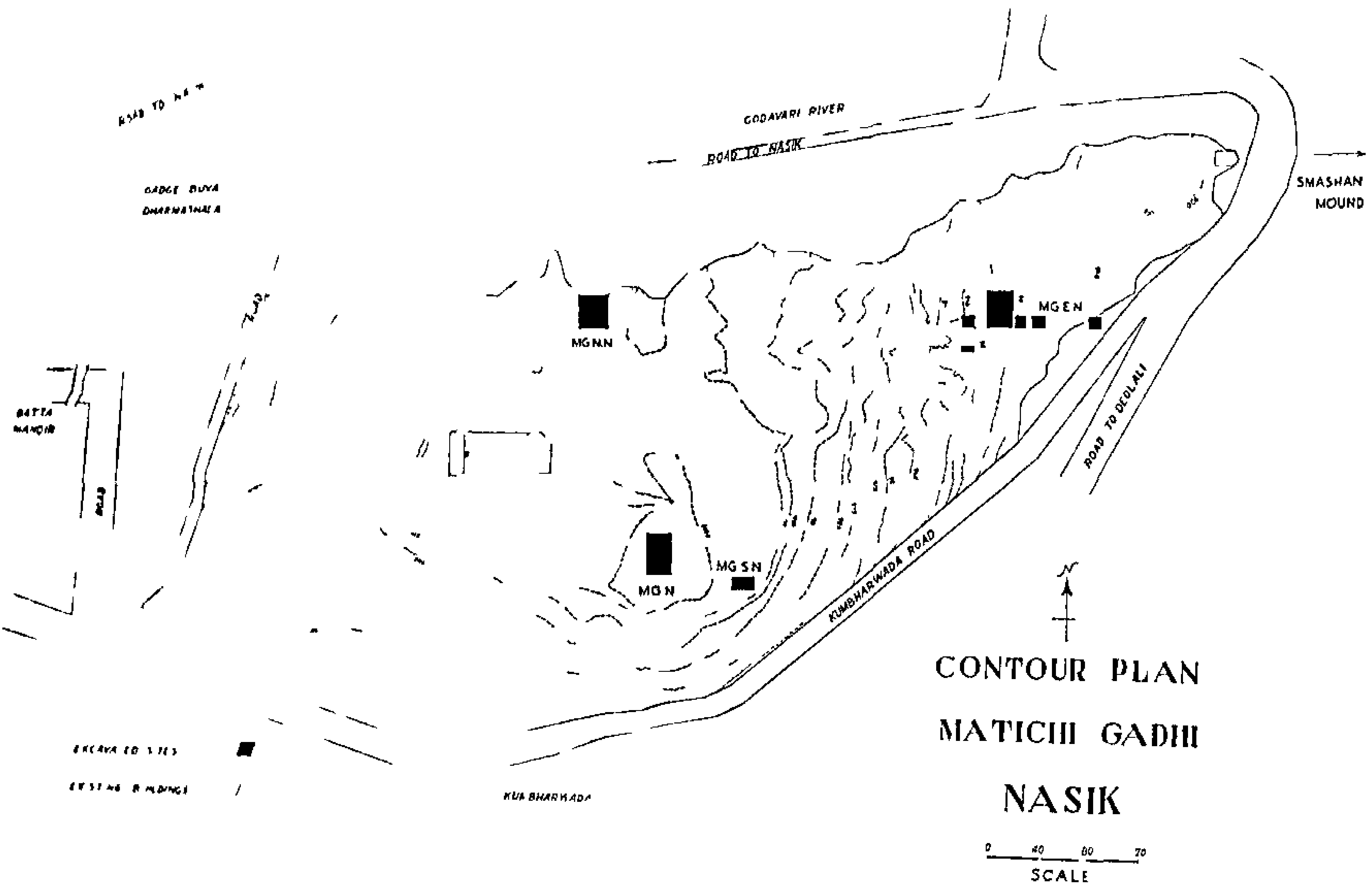
Intensive exploration in and around Nasik, and excavation at the site referred to, as well as at Jorwe, near Sangamner in the Ahmadnagar District, fortunately justified all our hopes and expectations These have brought to light five main cultural periods Briefly their features are as follows

Early Stone Age[20] Tools of trap rock—cleavers, scrapers, and hand axes of Late Abbevillian and Early Acheulian type—from the buried river bed at Gangawadi, 10 miles north west of Nasik[21]

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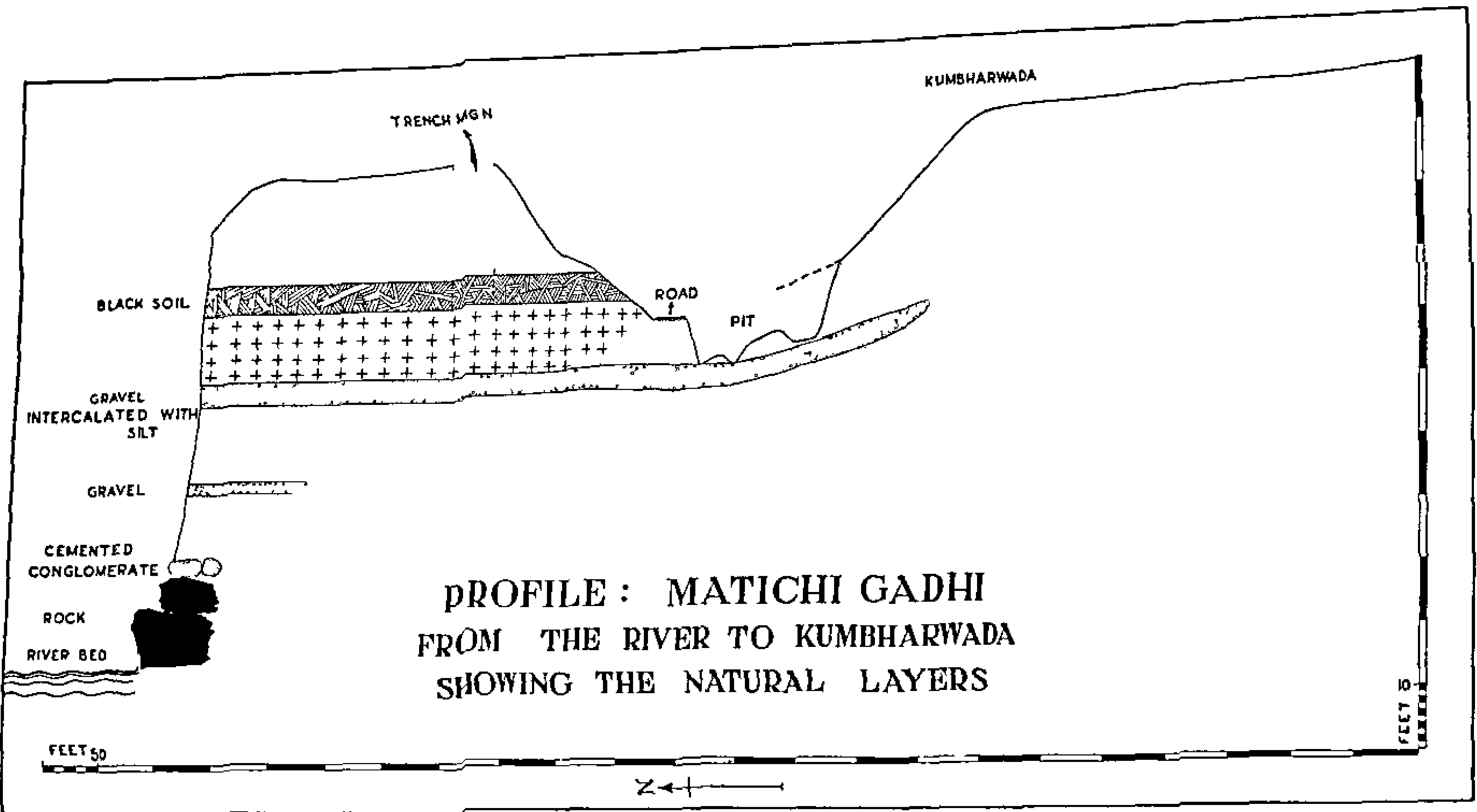
20 Since this period is not represented in the regular excavation it is not numbered and included as a period in this summary

21 For details see SANKALIA H D *The Godavari Palaeolithic Industry* Deccan College Monograph Series 10 (Poona 1953)



CONTOUR PLAN
MATICHI GADHI
NASIK
GODAVARI RIVER
ROAD TO NASIK
SMASHAN MOUND
ROAD TO DEOLALI
KUMBHARWADA ROAD
MG E N
MG N N
MG S N
MG N
BATTA MANDIR
ROAD
0 40 80 70
SCALE

Plan B (*See* p 5)



Section C (*See pp , 9, 19*)

Period I	*Chalcolithic or Early Bronze Age* Refined microliths—trapeze, lunates and two edged blades, some possibly obliquely blunted into a point, of chert and chalcedony, in association with an ochre-washed orange coloured pottery, occasionally painted with red or black bands At Jorwe along with these cultural elements were, probably, associated low grade bronze axes and a copper bangle A definite assertion cannot be made, since these were not found in the regular excavation
Period IIA	*Early Historic* Besides the N B P and the Megalithic like black, and black-and-red ware, occur also an utilitarian red pottery, ruins of mud-walled houses, with ring-wells or soak pits, and articles of domestic use, such as the four legged saddle querns, and tools and weapons of iron
Period IIB	*Later phase of Early Historic* In addition to the above, cast uninscribed coins, and a few sherds of the Āndhra criss cross ware
Period III	*Roman Contact* Sherds of Samian ware, and sprinklers and bowls of Red Polished ware, houses of large burnt bricks, roofed with well-made terracotta tiles These should be contemporary with the period of the Ksaharata Nahapana, his son in law Rsabhadatta, as well as their " exterminator ",—Satavahana Gautamiputra
Period IVA	*Early Muslim* Ruins of Stone Structures Celadon and Glazed ware
Period IVB	*Mughal* Ruins of Stone Structures, with a coin of Akbar
Period IVC	*Maratha* Ruins of Stone Structure, with a coin of Malhar Rao Gaekwad of Baroda on the surface

There is a definite overlap between Periods IIA and IIB, and Periods II and III, while the late disturbance has caused an admixture between finds of sub phases of Period IV and II (and between these and those of II and IV) in the main trench Period III does not seem to be represented in the main trench

Conclusion

From the summary it will be evident that the excavation, though on a limited scale does confirm the succession of events as known to history

and briefly related above (pp 2-4) What we miss in the archaeological sequence is the finds of the long period between A D 300—A D 1300, when the dynasties mentioned previously ruled the country, one after the other This lacuna may be due to the fact that this particular site was abandoned during the period in question, and re-settled, as affirmed by tradition, only during the Muslim period

The discovery of a proto-historic habitation at this place is indeed important For, traditionally Pancavati, on the opposite bank, is believed to be the site of such or ancient habitation Though the *Gazetteer* had noted the existence of a low mound, 30 feet in height, about 100 yards, south of Sita's cave, no traces of it have remained, nor any other sites or their remains, were seen during our explorations Excavations, on the other hand, indicate that one of the areas at Nasik, where civilization first grew up, is the area known as Juni or Matichi Gadhi From the location of the Smasāna (Hindu cremation and the Lingāyat burial ground) at the foot and the top respectively of a mound across the Deolali road, on the east, it can also be asserted that the habitation never extended eastwards, but either began or ended at this point For in India, as a rule, the smasana is situated outside the village, town or city Further this mound (on which we had encamped) was found to be thoroughly devoid of any antiquities [22]

The nature of the soil suggests that when this culture flourished, the region was well-wooded It was also a long time after the Palaeolithic For the layer containing the tools of the latter are buried deep below in thick deposits of earlier gravel and clay, and separated from the black surface soil by nearly 20 feet of finer gravel and silt, both at Gangawadi and at Nasik [23] These suggest three main climatic phases—the first wet phase, then a dry phase, and again a wet phase During the last, owing probably to vegetation, a layer of heavy black or blackish soil was formed on the fine gravel and silt, deposited during a phase of aggradation It was then that a more civilized man, knowing wheel turned pottery, and perhaps the art of smelting copper and tin, though for most of his needs using tiny stone tools, started cutting out the forests, and settled on the land, all along the

22 Future workers might question this statement when they discover pottery at the eastern end of this mound For their information it is necessary to state that this is due to 're deposition" by us, as the flat surface was converted into our 'Pottery Yard

23 At Nasik the lowest clayey layer is not visible, but the earlier well cemented gravel is exposed at the bottom on the western side of the Smasāna Mound It rests on the rock

Godavari and its tributaries, the Girna and the Pravara For subsequent explorations have revealed a few identical elements of this culture, besides Jorwe, at Bhojāpur[24] near Sinnar, Kopargaon[25], Nevasā[26], and Paithan It was on the debris of this, but probably after a lapse of time (for there is no overlapping of cultures at Nasik, whereas Jorwe and Kopargaon seem to be One-Period sites), that the early historic cultures grew up Thus arose the famous towns of the Deccan, such as Nasik, Paithan, Karhād and Kolhāpur.

II

STRATA AND STRUCTURES

Localities and Trenches

Four trenches were laid on the mound called Matichi Gadhi, hereinafter called MG N, with a view to knowing the nature and extent of old habitations, as these were not clearly visible in the natural and artificial exposures of the sides of the mound

The main trench, called MG N (I) (20 feet ×40 feet), was laid on the highest and the available even top of the mound with the object of finding the maximum succession of layers [Plan B]

A series of circular brick structures were exposed on the mound at various places In order to know their nature, purpose and antiquity, a trench (10 feet ×10 feet) on the southern slopes of the mound—called MG S N (II) henceforth—was laid in such a way as to have two sections of the trench at right angles to the three of such structures already exposed to view

Besides the circular brick structures, the mound exposed several others A part of a brick wall was exposed on the northern section of the mound overlooking the river Godavari, flowing some eighty feet below A trench (10 feet ×10 feet) was laid so as to include the brick wall in it, as it was hoped to make the position and the antiquity of the wall more clear This trench lying on the northern side of the main trench MG N at a distance of nearly 170 ft, was called MG N N (III)

24 Information kindly supplied by Shri SALI and Shri M N DESHPANDE Superintendent Arch Depart Western Circle, Poona

25 This site was discovered by Shri SALI Later it was jointly examined by all the three of us

26 See the list of sites p 154 and Map (Frontispiece)

With a view to understanding the nature and antiquity of several stone structures that were partly exposed and also to ascertain the depth of the natural earth on the eastern slopes of the mound, a series of step trenches (10 feet × 110 feet) were laid out when digging in the main trench was much advanced. These were called as MG.E.N.(IV).

Another low mound lying to the south of the MG.N. and separated from it now by a modern road but perhaps originally a part of the MG.N., and called " Kumbharwada ", owing to the settlement of potters on it, was also taken up for excavation. The earth-grabbers had exposed a well built brick-wall running east-west. Trenches termed K.W.N.(V), therefore, on either side of the wall were laid, so that the sections of the upper and lower trenches on the slope might be at right angles to the wall.

MG.N.(I)

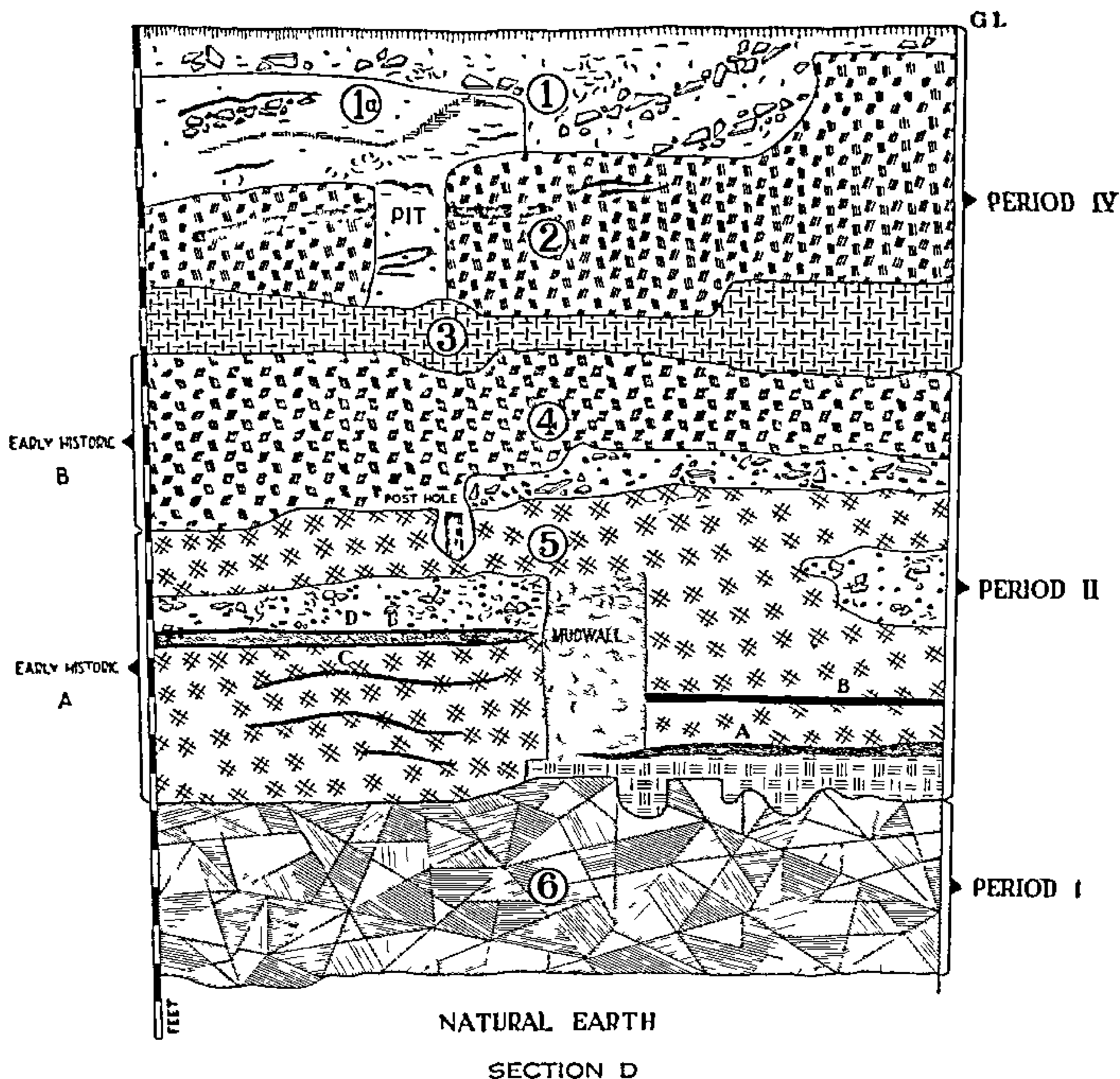
This was the main trench, measuring 40 feet NS × 20 feet EW. It was further sub-divided into A, B, C, D, E, F, G and H, each sub-trench being 20 feet by 5 feet. [Plan B and Section D].

After removing the top humus, a layer of debris was exposed in all these sub-trenches. This consisted of brick-bats, ash deposits, loose brown earth and pieces of charcoal. Its thickness varied in different sub-trenches. The second layer was thick and much disturbed. It consisted of greyish earth with large patches of ash, and a number of pits dug ostensibly for earth-grabbing. Its disturbed nature was shown by the heterogenous finds. Besides late (Muslim) glazed pottery, it yielded a sherd of N.B.P. along with several others of the red-and-black ware.[1]

Layer (3) of yellow brown earth, though steady in section facing north was absent in sub-trenches E, F, G and H. It was exposed in sub-trench A at a depth of 6 feet 7 inches and had a thickness varying between 2 feet to 2 feet 6 inches. It had extensive charcoal streaks. Along with the first two layers, this layer also gave a mixed stuff of late and early antiqui-

1 Information available from a local gentleman revealed that as late as 1907, this area was cultivated under millets The blackness which a soil inherits due to vegetation in a field, was clearly exposed in the sub-trench G at a depth of about 4 feet 11 inches When the cultivation was given up, the earth grabbers who lived nearby at Kumbharwada took full advantage of the orphaned mound, and their devastation in taking out the finest earth and depositing the brickbats and other heavy stuff was clearly attested to by the first two layers

SECTION : MAIN TRENCH
MATICHI GADHI NASIK
FACING NORTH



NATURAL EARTH

SECTION D

ties evidenced by three sherds of N.B.P., crude unburnished red ware and several sherds of the red-and-black pottery.

It was only with the fourth layer, consisting of dark grey earth, more compact than the top three layers, that some definite evidence of habitation could be had. This layer, exposed at a depth of nearly eleven feet from the surface of the trench, contained a thick debris of burnt clods of clay, as also fragments of bricks. Some intact bricks were also exposed lying at random in the section facing north. It yielded as many as ten sherds of N.B.P., cast copper coins, a comparatively larger quantity of black-and-red ware and several inscribed potsherds. These finds help to date the occupational debris of about 1-1/2 feet which was also marked by a post-hole containing pieces of disintegrated wood on the eastern edge, to a period slightly later than the series of occupational phases exposed in layer (5) below.

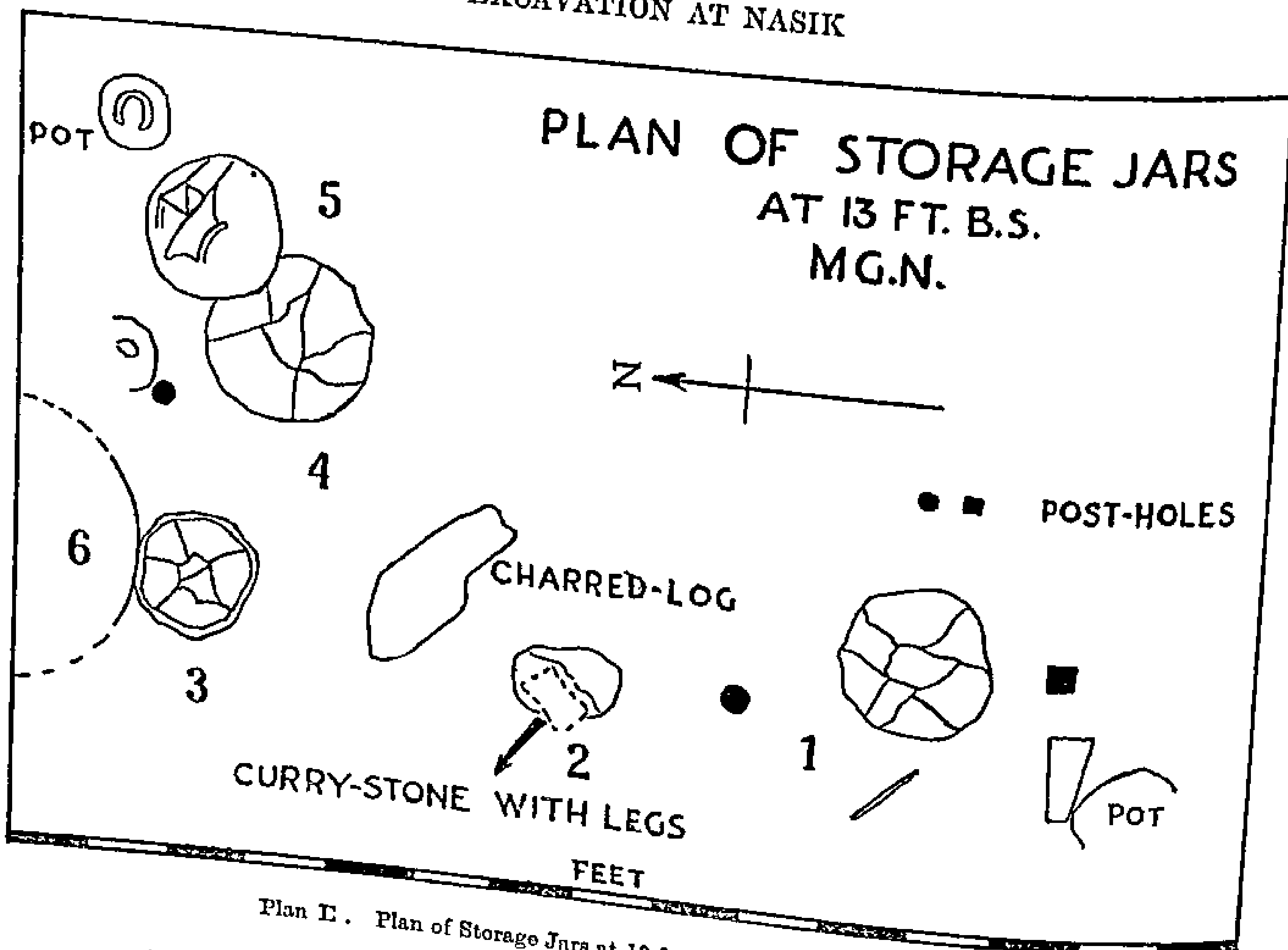
The fifth and the most important layer was exposed at a depth of about 13 feet from the surface in sub-trench A. It consisted of dark brown earth and had a somewhat uniform thickness of about seven feet in all the sub-trenches. There were extensive patches of ash, charcoal and burnt clay, suggesting a house fire. Even the pottery had suffered from this calamity.

This layer exposed four phases of occupation and three floor-levels.

Habitation (*d*)

This—the latest phase of occupation in this period—was exposed at a depth of 15 feet 2 inches (Section D above). It was characterised by the debris of a thickness of nearly one foot over a floor-level made of a layer of green *murum* and sand, sandwiched in between a pair of compact black clay layers to give it a firm base. To the western edge of this floor-level was exposed a portion of a mud wall of compact whitish clay mixed with potsherds. It had a thickness varying between 2 feet 6 inches to 2 feet. Along with potsherds as many as five crystal beads were also recovered in this wall.

Not less than six storage jars (*Rāñjaṇs*)—three with rounded bottoms and the rest tub-shaped—were exposed in this habitation (Plan E). Along with ash and charcoal, these jars yielded burnt potsherds and clods of clay. An intact, large, log of wood burnt down to charcoal was also found lying nearby. It was evident, therefore, that the whole habitation was destroyed by fire.



Plan E. Plan of Storage Jars at 13 feet B S MG N. (I) page 11.

The position of the mud-wall running in an oblique E-W direction, with an arm extending at right angles in the middle of it towards the south, indicated the existence of two hutments, possibly contemporary,—one to the east and the other to the west [Section D].

Along with these structures, a pair of ring-wells or soak-pits was exposed in this layer at a depth of 14 feet 6 inches in sub-trenches F and G. Both of these were sealed by layer (4).

Habitation (c)

Immediately below the floor-level of habitation (d) was exposed another floor-level consisting of a black clay layer of about two inch thickness, overspread by a layer of green *murum* and sand of one inch thickness. These two were covered with a bed of black compact clay. The process of making the floor-levels, therefore, was the same in habitations (c) and (d), even though the former seemed to have been earlier. However, the

time gap between these habitations does not appear to be much It is quite likely that the occupants of habitations (c) and (d) were the same, and that those of the latter simply raised up or re made the previous floor-level of habitation (c)

Habitation (b)

Still earlier habitation was exposed at a depth of 17 feet 6 inches from the surface of the trench, and 2 feet 4 inches below the floor-level of habitation (c) This habitation (b) was characterised by a floor consisting merely of a bed of rammed black sticky clay, about 2 1/2 inches thick, but much disturbed in almost all the sections Around it there were extensive patches of ash and charcoal A thick debris of burnt clay was exposed in the section facing east belonging to this habitation

It was interesting to note that the mud wall which was exposed along with habitations (c) and (d) was present in this phase also It was detected towards the eastern edge of the floor-level (b) Remarkably enough, the percentage of potsherds etc found in this wall, at this level, was much less than that found at the habitation levels (c) and (d) It is probable, therefore, that the habitants of (c) and (d) in their attempt to raise the old wall up, used the material of the earlier habitation (b) That this wall belonged to habitation (b) was further evidenced by the fact that it rested on the hard surface of a still earlier habitation (a) It was but natural that when the people of habitation (b) wanted to erect a wall they thought it unnecessary to have a more firm foundation for the wall as they struck the floor-level of a previous habitation (a) [See Section D]

Habitation (a)

At a depth of 19 feet 6 inches from the surface of the trench, and 2 feet below the floor-level of habitation (b), was exposed a still earlier habitation indicated by a floor-level made on top of the sixth layer consisting of a very compact, sticky black soil This floor was made by spreading a layer of greenish *murum* and sand over a raised black clay platform,—the thickness varying between 1 to 3 inches Thus, this was the earliest occupation in layer (5)

All these four habitations (a, b, c and d) could be roughly dated on the basis of the find of thirteen N B P sherds—the number being the maximum as compared to the quantity of similar sherds obtained in upper

layers. Thus the fourth and the fifth layers which yielded ten and thirteen N.B.P. sherds respectively, besides a large quantity of black-and-red and ordinary red pottery, seem to have been earlier and later phases of early historical period—the earlier phase (IIA) (layer 5) characterised by a quick succession of as many as four habitations, while the later phase (IIB) (layer 4) denoted by only one habitation debris.

Habitation of the Proto-Historic Period

The sixth layer consisting of dark, compact, sticky black clay was exposed at a depth of 20 feet 4 inches in some places. Its thickness of 4 feet 6 inches was more or less constant in sub-trenches A, B, C and D where it was completely dug out.

The finds of this layer were microliths, painted pottery and a large amount of ochre-washed ware. No N.B.P. or red-and-black sherds were found in this layer. Thus, this was the earliest occupation phase on the mound. Our excavations were not extensive enough to give an idea of the nature of the habitation.

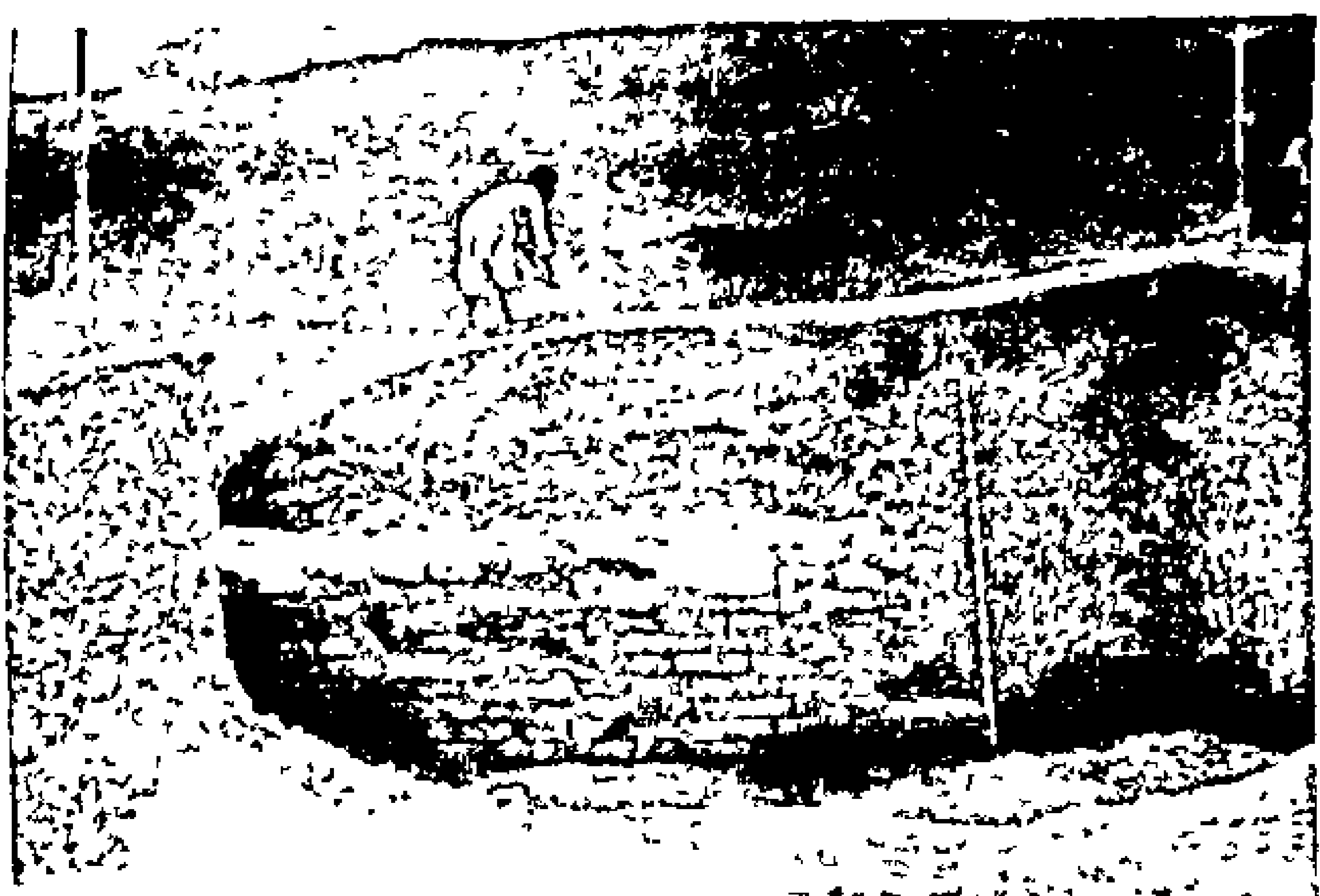
Natural earth which consisted of yellow silt was exposed at a depth of 25 feet 2 inches

MG.S.N. (II)

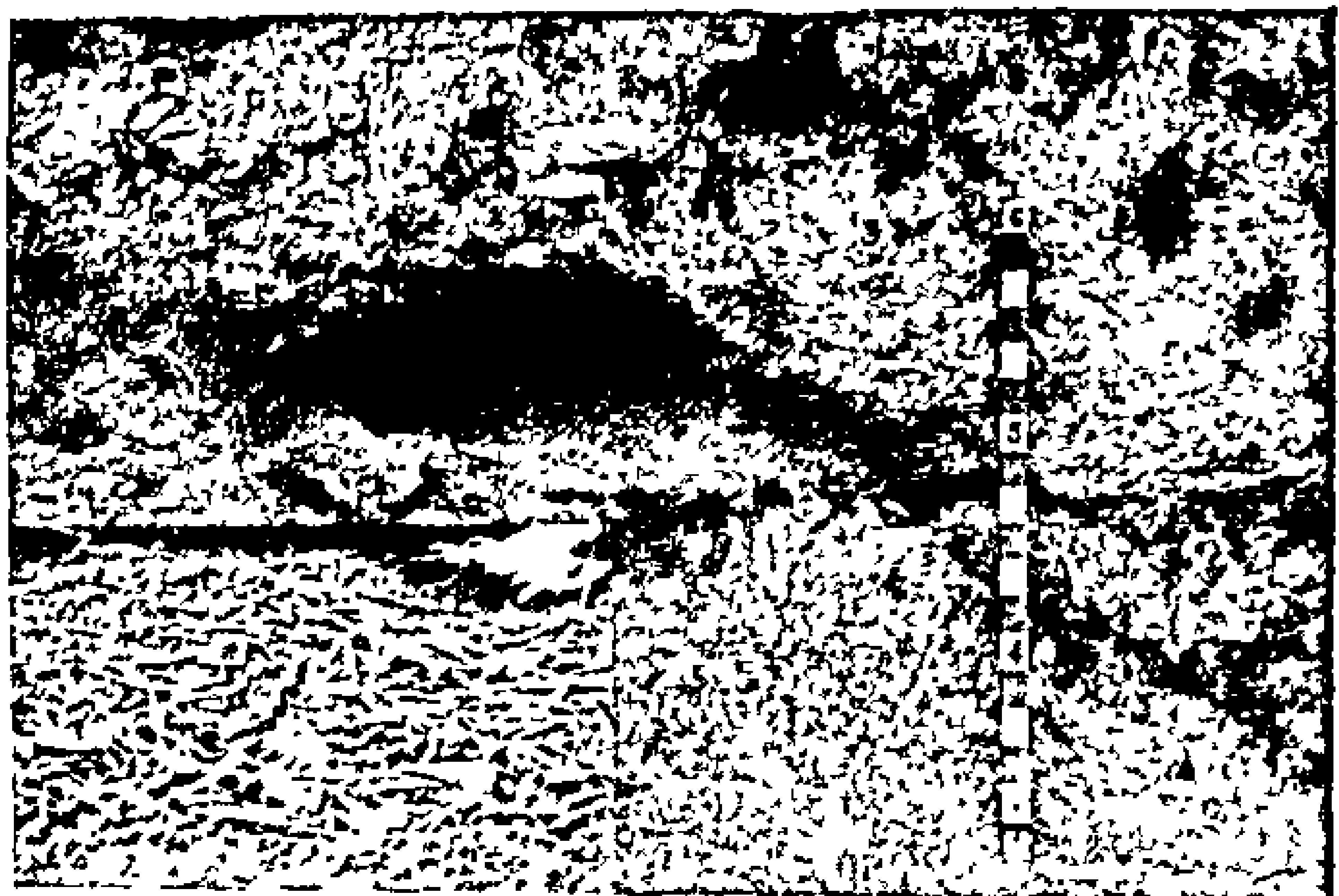
This trench, as remarked elsewhere, was laid in order to know the nature of the circular brick structures.

Out of the three structures which were included in the lay out of the trench, the middle structure was built with smaller bricks and was of a circular shape [See pl IVc] The bricks were wedge-shaped, having their measurements 6-1/2 inches × 5-1/2 inches × 4-1/2 inches with a thickness of 1-3/4 inches. There were 15 bricks in one course and there were 168 courses from the bottom to the top The bricks were so arranged as to have their narrower end inside and the broader outside. The outer diameter of the structure was 3 feet and the inner 1 foot 9 inches The structure when fully exposed and broken was seen to rest on a compact yellow silty earth at a depth of 28 feet below the present surface. This layer was the same as the natural earth found in MG.N. at a depth of 25 feet 2 inches

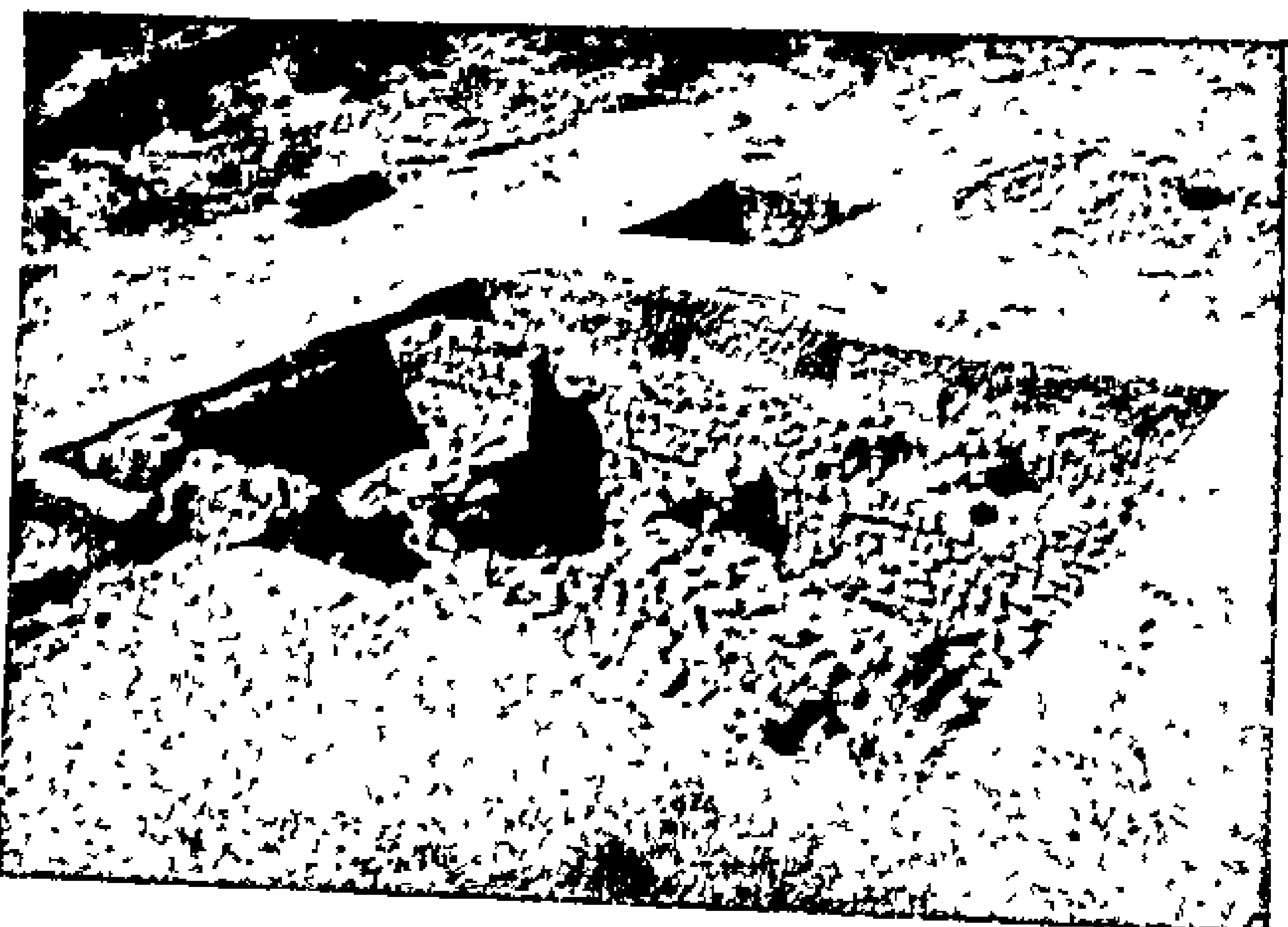
The layers here differed to some extent from those exposed in MG.N. The lowermost layer was of yellowish silt. The fifth layer having a thickness



(a) Brick wall (Period II-III) on the Kumbharvada Mound Nasik (*See p. 16*)



(c) Layer of bone points, K.W.N. Inset showing close-up of the same. (*See p. 6*)



(b) Remains of rubble stone walls, (Period IV), MGEN (III) (*See pp. 16-17*)



(d) Post hole with disintegrated wood in layer 4, MGN. (I) (*See p. 21*)

PLATE IV



(a) B ck and ng ned we n MGN ( ) Pe od II (A) (S p 93)



(c) Th ee b ck l ned wells n MGSN (II) (See p 14)



(b) Clo e-up of a ng ned we Pe od II (A) (S e p)



(d) Sect on of a b ck l ned well n MGSN (II) (Se 1)

of about nine feet consisted of yellowish brown earth which was totally devoid of pottery or other finds.

Above the fifth was the fourth layer nearly four feet in thickness and having jet black soil similar to that constituting the sixth layer in MG.N. This yielded a few painted potsherds and microliths.

At a depth of about 7 feet from the surface, layer (3) consisting of dark brown compact earth was exposed. It had a thickness of nearly 1-3/4 feet.

The second layer, however, was less compact and whitish brown in colour. It had a thickness of about 5-3/4 feet with extensive patches of charcoal and ash.

The top layer was full of debris consisting of brickbats. It yielded pieces of the red-and-black ware.

The purpose of these structures could not be determined even after breaking open two of them. The fact that these were built by inhabitants later than those of Period II could be ascertained from the fact that the layers exposed behind the brick-structures were undisturbed [pl. IV d]. They were the same as those outside or adjoining these structures. The fact must be that the builders of these dug out a circular pit of 3 feet diameter, from the top to a depth of 28 feet, and then they built the structure from the natural earth to their topmost contemporary layer. It is quite possible that they used the same earth which came out of the pit for erecting the structure. This conjecture can also account for the presence of the red-and-black ware inside the structure as well.

MG.N.N. (III)

This trench [Plan B], which was laid out to determine the nature of a projecting brick-structure, exposed the topmost layer consisting of clean brown earth probably washed out from higher parts of the mound. Below it, at a depth of 2 feet 9 inches, was exposed the second layer full of brickbats and potsherds. The layer (2a) was full of stone rubble in the southern half of the trench, and had profuse fragments of potsherds in the northern half.

A very much disturbed layer (3), consisting of dark brown earth was exposed at a depth of 7 feet from the top, and it had extensive ashy

patches Right in the middle but below this layer was found a big pit with a flat base, a width of about 4 feet to 6 feet and a depth of 4 feet It was sealed by layer (3) [Section F]

The (3a) layer had extensive patches or bands of black sticky earth and of ashy stuff A post-hole was exposed at the southern corner of the bottom of the pit This post hole ran even one foot below the base of the pit and was about 6 inches in breadth

The level of the lowest course of the brick structure, at right angles to this section, when projected on this section struck the middle of the pit The fourth layer consisted of dark sticky clay similar to that in layer (6) of MG N and (4) of the MG S N, and yielded microliths and painted pottery

Thus in MG N N also, two periods of occupation could be noticed The earliest was that of layer (4) denoting the microlithic phase The second and later period evidenced by the brick structure of five courses of bricks could be ascribed to Period II It was a very small squarish structure

The natural earth of yellow silty nature was exposed at a depth of 15 feet 9 inches in this trench and was similar to the natural earth exposed in MG N and MG S N at a depth of 25 feet 2 inches and 28 feet respectively

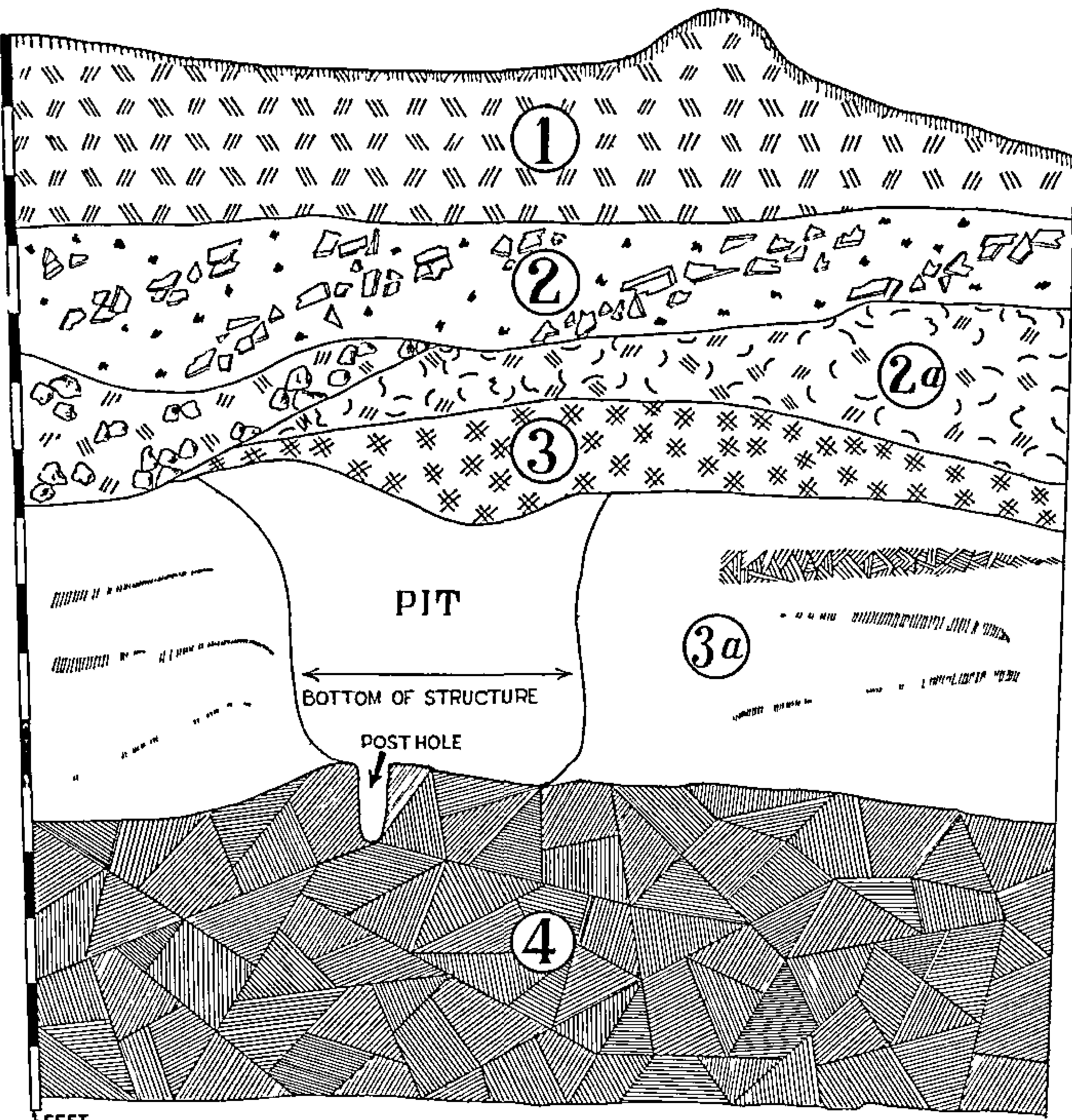
MG E N (IV)

The original plan was to have a long trench (called Tr I) 10 feet × 110 feet sub divided into eleven sub trenches of 10 feet × 10 feet and called as a, b, c, d, e, f, g, h, i, j and k Out of these, however, only Ia, Id, Ie and Ik were excavated [Plan B]

Digging the top layer consisting of whitish brown earth with brick-bats to a depth of about 9 inches from the surface, in trench Id, a stone wall (wall 'c') was exposed It consisted of stone and rubble and small boulders of conglomerate Both these were cemented in sticky brown clay, but the latter was found to be very loose

Digging further to a depth of two feet from the surface of the trench, still another wall (wall 'b') running under the top wall 'c' was exposed It ran in a slightly oblique N-S direction It was noticed that the founda-

SECTION: MG.NN
FACING EAST



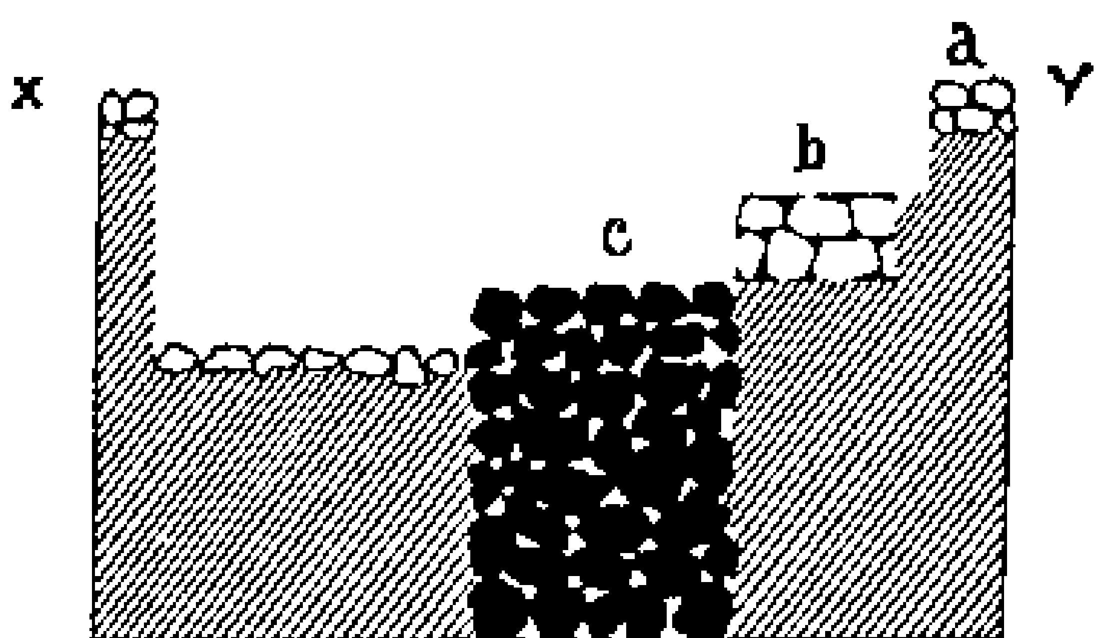
SECTION F

PLAN & SECTION~

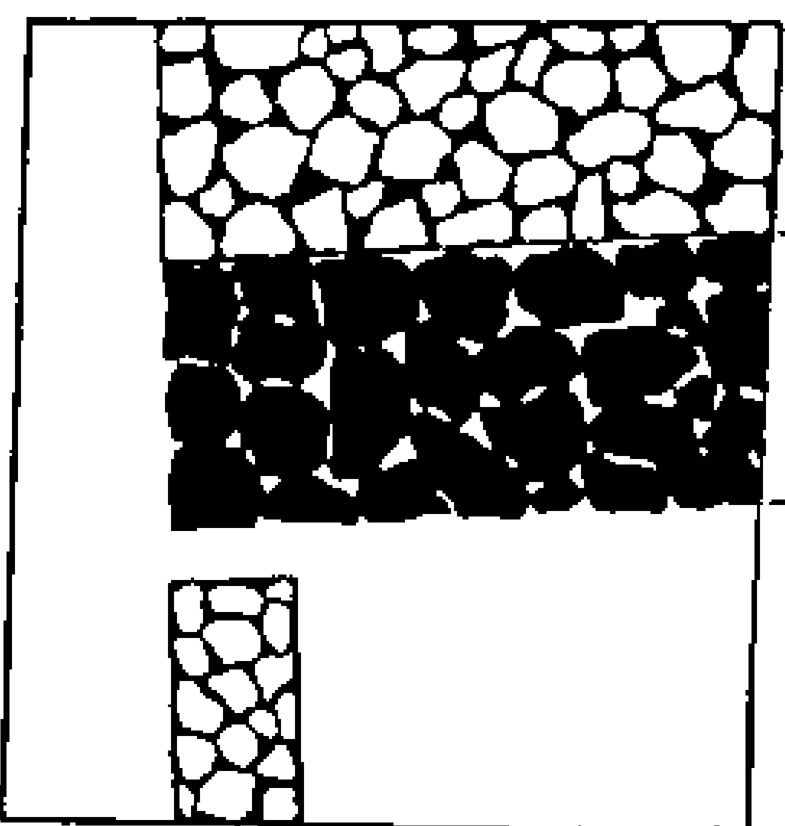
OF STONE STRUCTURES PERIOD IV

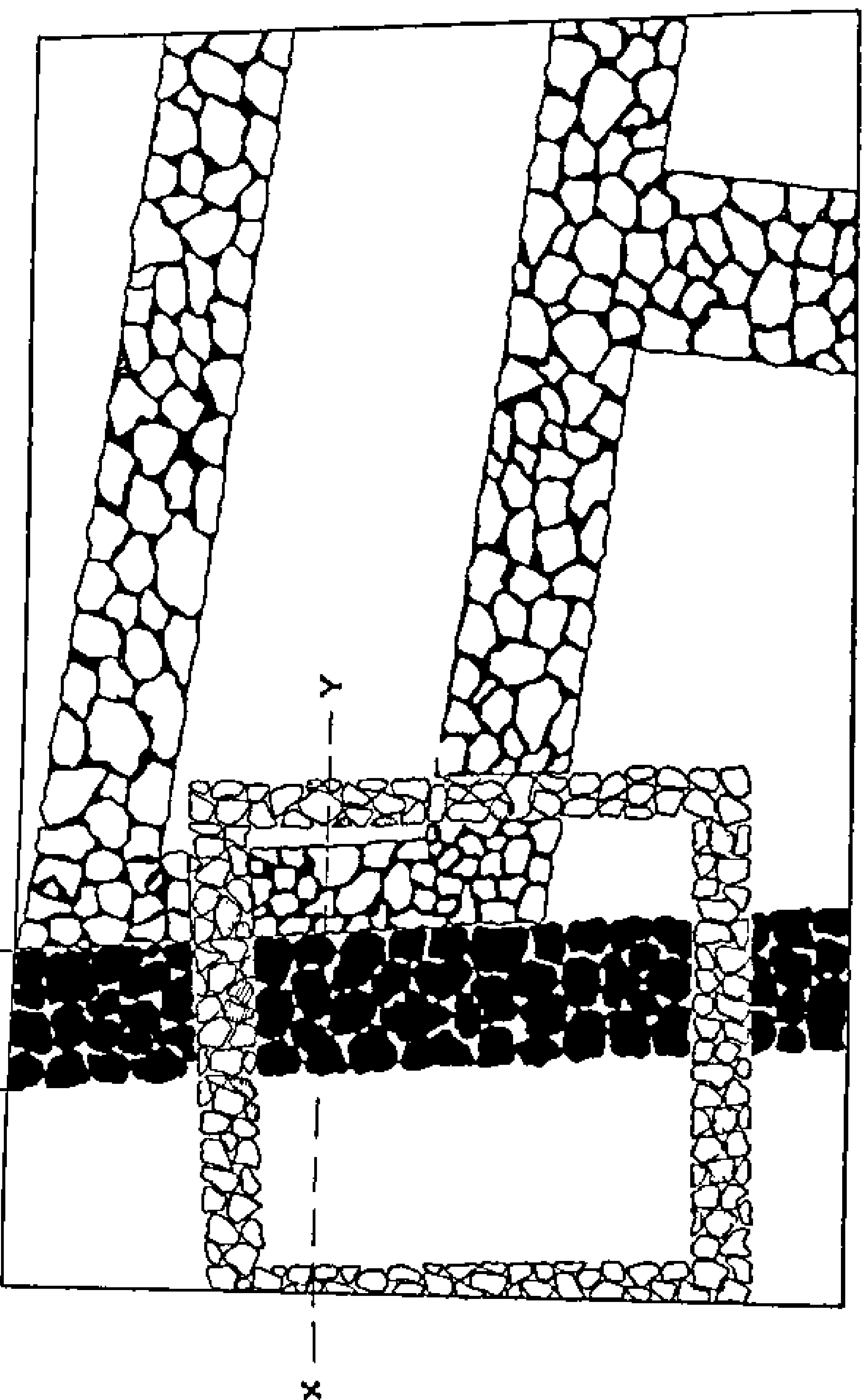
MG.E.N.





SECTION ON XY





tion stones of wall 'c' rested on this wall Extending the trench 20 feet towards north (named as Ext I), it was found that this wall 'b' ran to a distance of nearly twenty feet towards the north and some twenty to thirty feet to the west It was a rectangular structure with the breadth of the wall ranging between 3 feet 6 inches to 2 feet

The third and the earliest structure in this trench was exposed at a depth of 3 feet below the surface It consisted of a broad stone wall (wall 'a') [See Plan G] It ran east-west to a length of about 30 to 32 feet Its breadth was nearly 3 feet No extensions of it either northwards or southwards were found Glazed Muslim pottery and a coin of Akbar helped to assign these structures to the Muslim period [pl IIIb]

Digging in the sub-trench Ie, immediately to the east of Id, upto a depth of 24 feet, revealed a series of oblique layers sloping towards the south showing that the mound then had probably a different contour as compared to its present one The top layer (1)—just by the side of the topmost wall 'c' exposed in Ie which seemed to end in this sub-trench—consisted of loose whitish brown earth full of brickbats and pebbles, showing probably the washed out material of the structure The layer below, (2) consisted of brownish earth with less brickbats This layer broadened towards the east Layer (2a), consisting of a broad ashy patch, was very irregular, nearly one foot in thickness, and was light grey in colour It indicated that there was possibly a human occupation nearby and that the ash was deposited as a dump here by the inhabitants

At a depth of five feet from the surface a very thick layer (3)—nearly four feet in thickness—consisting of brown earth full of kankar was exposed The layer below i e (3a) consisted of ashy yellow stuff of a thickness of nearly one foot It ran obliquely The fourth layer continuing to a depth of 24 feet—from the 10th to the 24th foot from the top of the trench—was full of dark brown earth with kankar The latter, however, decreased below 22 feet

In sub trench Ik nearly forty feet to the east of Ie alternate layers of sticky chocolate coloured earth and loose brown earth were exposed The stratification here seemed to be much disturbed on account of the washed out material from the top of the slope, as also due to the rubble deposited here while making the modern road [See Plan B]

K W N (V)

A reference has already been made to the chance discovery of a wall on this mound As the deposits of earth above the wall were already removed by earth-grabbers, it was not possible to know the stratification lying on top of the wall

As for the wall, it ran east west and had 10 to 11 courses of bricks These measured 1 foot 10 inches in length, 11 inches in breadth and 3 inches in thickness No extension of the wall either south or northwards could be detected The wall ran to a distance of more than 15 feet eastwards, and was possibly the remnant of a big structure [pl IIIa]

The trench adjoining the wall but to the south of it was 15 feet × 20 feet and the one to the north 10 feet × 10 feet

In the northern trench, the topmost layer consisted of debris of brickbats and potsherds upto a depth of 1 foot 6 inches The second layer, nearly of the same thickness as that of the top one, was of the same stuff but had less potsherds and more brickbats Below it was exposed a stratum of compact dark brown earth and it was in this layer that the foundation trench (9 inches broad and 1 foot deep) for the wall was detected It was made with pebbles and compact clay to give stability to the structure above The pottery found in association with this structure was red and black

As already noted, the first three layers were partially cut off in some places by the earth grabbers Below these, a somewhat undisturbed layer (X) consisting of ash, brick pieces and charcoal fragments yielded black and red pottery, even below the wall Layer (X2) was a patch of charcoal dust and yielded some burnt fragments of pottery The next layer (X3) going to a depth of 9 feet 6 inches consisted of soft granular brown earth, and the nature of the pottery was the same

The last layer (X4), formed of deep chocolate coloured earth with profuse patches of blackish ash, rested right on gravel sloping towards the north from the south Gravel was exposed at a depth of 14 feet below the surface of the trench

The stratification in the trench to the south of the wall was extremely disturbed, and most of it was gulped up by the presence of a big pit full of

K.W.N. SECTION
FACING WEST

X

X2

X3

X5

FEET

SECTION H

pottery dump and small stones. The gravel here was exposed at a depth of 8 feet from the surface. That means that the gravel layer takes a dip of nearly six feet towards the north. The pottery yielded in the top layers was the usual red-and-black along with a few sherds of the red polished ware.

From the strata exposed in the northern and southern trenches in relation to the wall, the following observations could be made. [Section H]

(i) The presence of the gravel indicates that the course of the river Godavari might have been over this region in the remote past—or, more precisely, the river might have been flowing in the southward old bed and that it has changed its course now, cutting out a new channel.

(ii) The earliest occupation here took place in the historical period. This, from the nature of the finds, may be assigned to Period IIA.

(iii) Much later, but during the early historical period, a brick structure was erected on the debris of Period IIA. This, from the associated finds, may be placed in Period IIB-III.

(iv) A regular cultural sequence of human occupation could not be had on this mound, as it is extremely disturbed.

Structures of Various Periods

It will be clear from the details given up till now that there were four periods of occupation at Nasik. It will, therefore, be interesting to see how the occupants in these various periods lived and what sort of houses they occupied.

Period I : Proto-Historic

Besides microliths and painted pottery, no evidence was available to say about the nature of the habitation in this period. This may be had when more extensive excavations are undertaken.

CONCORDANCE AND CORRELATION OF VARIOUS TRENCHES AT NASIK

PERIODS	TRENCHES					Approximate Dating
	MG N (I)	MG E N (IV)	MG S N. (II)	MG N N (III)	K.W.N (V)	
MUSLIM MARATHA Period IV	(1) Debris (2) Grey earth & brickbats. (3) Yellowish brown earth	(1) Loose whitish brown earth with brick bats and pebbles (2) Brownish earth with less brick bats (2a) Broad ashy patch (3) Brown earth (3a) Ashy, yellow earth	(1) Debris (2) Whitish brown earth	(1) Clean brown earth (2) Brown earth with brick-bats. (2a) Stone rubble		c 1500 to 1800 A D
ROMAN CONTACT Period III		(4) Ashy brown earth with kankar			(1) Debris with potsherds	c 3rd 1st century A D
EARLY HISTORIC Period IIB	Dark grey earth	—Not dug—		(3) Earth with ash patches	(2) Debris with less potsherds (3) compact dark brown earth	c 1st century A D. to 3rd century B C
EARLY HISTORIC Period IIA	(5) Dark brown earth	do	(3) Dark brown compact earth	(3a) Blackish earth with ash	(X) Ash and brickbats (X2) Charcoal dust (X3) Soft brown earth (X4) Deep chocolate coloured earth	c 3 5 century B C
GAP						
MICROLITHIC WITH PAINTED POTTERY Period I	(6) Sticky black clay	do	(4) Sticky black clay	(4) Sticky black clay	Gravel bed	Before 500 B C to probably 1000 1500 B C
NATURAL EARTH	(7) Yellowish brown earth	do	(5) Yellowish brown earth	(5) Yellowish brown earth		

Period IIA Early Historic

While describing the layers, reference was made to the various floor levels and a mud wall, all comprised within layer five Though the area dug by us was not large enough to give a complete plan and idea of the structures existing at various phases in Period IIA, an attempt may be made to view the evidence as a whole

It appears that the earliest settlers in this period lived in mud huts The walls of these were made of brownish clay, and an even, firm floor of sand and green *murum* (top layers of disintegrated trap rock) This rested right on the black soil The roof of these huts was probably supported by wooden poles and rafters But, whether it was covered by tiles, kept in position by iron nails, cannot be said, for though no such tile was found, a number of long nails was recovered at this depth

Partial remains of two such huts were laid bare, one was in the eastern and the other in the western half of the trench These huts were separated by a common mud wall running slightly oblique but in N S direction

These huts were probably destroyed by fire, but were soon rebuilt by the same inhabitants or others The ground level was slightly raised by making a new floor with black earth The orientation of the huts remained as before The old partition wall of mud was raised But instead of making it with pure clay and straw, potsherds of possibly an earlier habitation were mixed in the clay to serve as a binding material The wall was nearly two and a half feet thick and ran in the north south direction and rested on the floor level of phase (a) The absence of any floor level or remnants of a mud wall in the northern sub trenches D to H at this level, suggested that the occupants used only the southern portions of the MG N covered by sub-trenches A to C

As in the case of the earlier one, this habitation (b) also seems to have been destroyed by fire, as was evidenced by the presence of large patches of ash and charcoal around the floor level It seems, therefore, that the structures of phases (a) and (b) met with a common cause of destruction viz fire

Soon, however, the site seems to have been resettled This is testified by the floor levels of phases (c) and (d) As remarked elsewhere, it is quite

likely that the occupants of these two phases were the same or that there was an insignificant time gap between the two In the latter case it is likely that the people of phase (d) remade or thickened the floor-level (c) which they themselves or some earlier occupants might have made a little earlier The technique of floor making seemed to have been more advanced than that at the time of phase (b), for, instead of spreading a single layer of compact black clay as done by people of (b), the occupants of phases (c) and (d) sprayed sand and *murum* in between a pair of layers of black sticky clay

Like the earlier occupants, these people also lived in mud huts as they seem to have raised the previously existing mud wall It seems that in doing so they used clay with more potsherds This was attested to by the occurrence of a greater quantity of potsherds in the wall at this level than that in lower levels That they used grass or hay as binding material could be seen from the contents of the one foot debris on the floor level This mostly consisted of charred lumps of clay, also containing burnt grass

The position of the floor level and the raised mud wall enclosing it towards the west, indicated that the occupants lived mostly in the eastern apartment Even though traces of these floor levels (c) and (d) were not clear in the western half of the section facing north, some patches of the same could be had in other sections especially in the section facing east It seems, therefore, possible that the portion or the apartment towards the east was used for better domestic purposes while the apartment towards the west was either a kitchen or a workshop These two possibilities could be inferred on the basis of the recovery of as many as six storage jars, a number of iron weapons such as knives, spear heads and arrow heads, several bones and animal teeth, an intact but burnt jaw of a pig, and an entire log of burnt wood It is quite likely that the occupants were either hunters or makers of metal weapons, and that though probably Buddhist they were non vegetarian This could further be corroborated by the discovery of several shells of the types Viviparus bengalensis' and those of 'Lamellidens and Parreysia the animals of which are even today used as food

The purpose of the storage jars was not clear as all of them yielded ash, charcoal and a few burnt potsherds Of the six, three had rounded base and the rest were tub shaped The largest of the lot had a diameter of 3 feet 5 inches and a thickness of about one inch It had no base as such,

as *murum* and black clay formed its base Finger impressions on these vessels suggest that they were handmade

From the large amount of ash, burnt wood, charred pottery and other objects, it seems likely that this habitation was also devastated by fire which can easily take place in a workshop And in this fire, the inmates left hurriedly leaving behind their storage jars, weapons, and their huts with wooden poles, evidenced by the traces of disintegrated and burnt wood exposed in postholes near this floor level It seems that the fire was more destructive in the western half, as a huge debris of burnt material was exposed in section facing the east It seems also probable that the onslaught of the fire was to some extent checked by the middle north-south mud wall which, when under fire, collapsed on the floor-level in the eastern half causing less damage than that in the western apartment

Ring-Wells

Along with these remains, a pair of ring-wells or soakpits was exposed in sub-trenches E and F, i e towards the north of these hutments of phases (c) and (d) They were exposed at a depth of 14 feet 6 inches below the surface—practically at the same depth as that of the floor-level (d) The wells were situated at a distance of three feet ten inches from each other

The well to the east had larger pottery rings, having grooves at both ends The groove at the lower edge was fitted in the upper edge of the lower ring [pl IVa, b] Fifteen such rings were exposed The total depth of this well was 16 feet 3 inches and it rested right on the natural earth

The well to the west had smaller rings with only one edge flattened and protruding on one side Originally this well seemed to have thirty-two rings, of which twenty were extant The total depth of the well was 14 feet 4 inches It rested on the virgin earth

That both these wells were not in use after the Period IIA was clear from the fact that these were sealed by layer (4) They were most probably not used also by the occupants of the hutments of phases (c) and (d) lying southwards, could be presumed by the east-west position of the mud wall which might have blocked the way to these wells It could also not be said that both these wells were dug at the same time For, the well to the west had two sets of rings The lower ones were intact and smaller than those of the adjoining well This original well was probably raised up for use as was

seen by the presence of bigger rings stuck up on the upper portion of the well to the east Thus the makers of the well to the east seem to have added the rings of the adjoining western well by using bigger rings similar to those of the eastern well

Naturally the question arises as to who used these wells As remarked above, the occupants of the mud hutments to the south did not seem to use it, as the passage was probably barred by the east west mud wall The answer to this was provided by the debris of burnt stuff found in trenches F and G Though no clear floor level was found here, yet signs of habitation were evidenced by postholes, probably of a structure contemporary with these wells The former contained disintegrated wood Thus, it might be concluded that these wells were used by the occupants living in the area covered by the trenches F, G and H and were contemporary with the people of phase (d), living towards the southern quarter in mud huts, the remains of which were found in trenches A, B, C and D

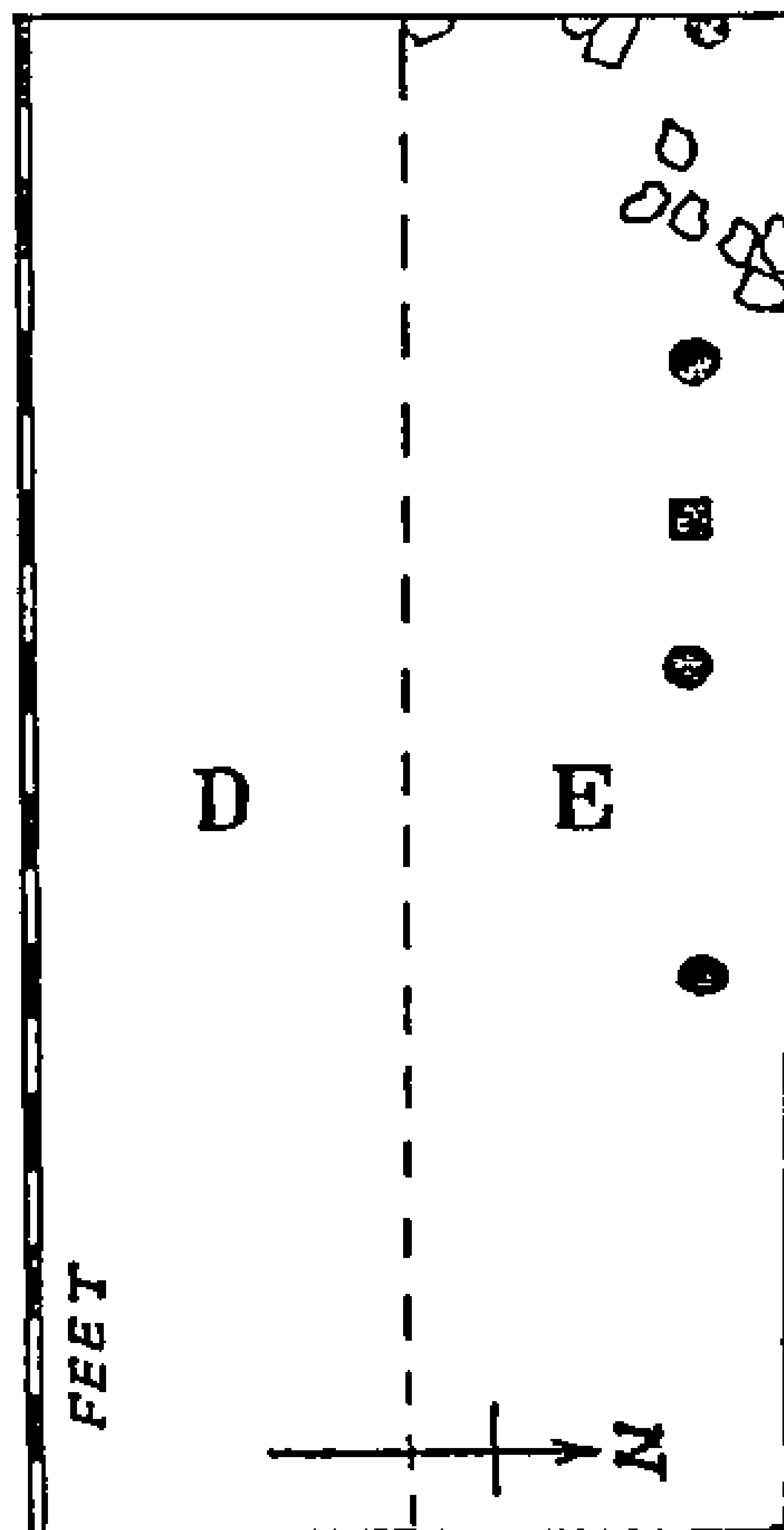
Another point worth notice was the presence of several stones dumped quite close to the well on the western side It may be that at the time of raising the original well with smaller rings, the occupants nearby might have deposited the stones as an embankment against the rings or as an approach to the wells

Since these wells yielded a large amount of intact pottery, along with other decomposed material it seems that they were principally used as soakpits

Period II B

Except for a thick deposit of debris of clods of burnt clay and several postholes, no other evidence of any structure could be had From this, however, it could be surmised that the occupants of this period also seem to have lived in mud huts supported by wooden posts Remains of the latter were detected in a posthole [pl IIId] Probably there were more than one hut at this level For a series of five postholes was located in sub trench F [Plan I] It seems, therefore, that there were contemporary huts, some to the south as revealed in sub trenches F and A respectively However, in none of these, evidence of a floor was available It is quite likely, therefore, that these habitations were of a temporary nature, or that the occupants here were too poor to make a well-fashioned floor level and hence they were satisfied with a roof overhead

POST-HOLES AT 8 FT 3 IN
LAYER 4 (PERIOD II B)
MGN.



Plan I

At about the same time or probably slightly later, there existed brick structures on the northern (MG N N) and southern (K W N) sides of the main mound The former overlooked the river and possibly was a wall of a very small room The measurements of the bricks were 1 foot 6 inches × 11 inches × 4-1/2 inches No extensions further than four feet in length and only one and a half feet in breadth could be had These were not sufficient to arrive at any definite plan of the structure

Similar was the case with the long brick structure exposed at K W N Here also no extensions either southwards or northwards of the wall were found The wall seemed to run only east-west From the measurements of the

bricks (1 foot 10 inches × 11 inches × 3 inches) it seems likely that the wall was used probably as a barricade or as a protective enclosure

The large amount of debris lying nearby and over it, however, indicated that besides this wall there were houses of bricks on this mound (K W N), which were roofed with rafters and tiles fixed with iron nails as a number of these were recovered The tiles were such as could be fixed in the adjoining ones on account of grooves, and had holes through which nails were inserted and stuck into the wooden rafters below

The nature of the structures—of Periods IIA and IIB, as well as their principal contents—large storage jars sunk into the floor, other pottery vessels, a few inscribed sherds, several iron implements and very few ornaments or valuables suggest that the residents were probably poor, and perhaps Buddhists They ate meat and pork but what they were by profession cannot be conjectured But, as remarked elsewhere, they were probably ironsmiths or hunters as suggested by the recovery of implements, big burnt storage jars and remains of animal bones

Period III Roman Contact

No structures of this period were extant Only Roman or imitation Roman potsherds like the Samian, the Rouletted and Red Polished ware were recovered from MG E N and the upper debris of K W N

Period IV Muslim-Maratha

Structural evidence of this period could be had mainly from the MG E N trenches Here, structures were found in association with a coin of Akbar and thus could be ascribed to the Muslim Maratha period [1]

As these structures could not be fully exposed, it is difficult to say as to what their plan was and to what purpose they were used The structure (c), however, was of a rectangular shape (14 feet × 11 1/4 feet) and possibly was a room There were no signs of any postholes It was also difficult to say whether it was roofed with tiles as no such objects were found The stones were cemented in mud which had become very loose It is quite

1 A coin of Malhar Rao Gaekwad was also found on surface at MG.N which provides evidence of occupation in the Maratha period Hence Period IV has been called Muslim Maratha

likely that the inmates of the house were poor and hence they could not afford to use better material. There was no attempt of floor making either. It is also possible that the room or the structure was used for purposes other than those of a residence.

Slightly earlier than the structure (c), was the structure (b). It had two parallel wings running north-south. Remnants of two arms of the wall mostly at right angles but one running towards the east and the other towards the west, were also detected. The stones of this structure were larger than those of (c). They were cemented in mud and the wall had a thickness of about three feet. The purpose of this structure could not be determined, but it seems likely that it was not meant to be a house but to be a protective barrier to a big gate which, as the local tradition says, was there in the Muslim period.

Another habitation was evidenced by the wall (a). The technique of building it was the same, viz. cementing rubble stones in mud. It had a thickness of nearly 3-3/4 feet. Four stones were laid breadthwise. No other evidence that could throw light on the nature of the habitants of this structure could be had.

As compared to the inhabitants of Period II, the inhabitants of Periods III and IV have left practically no clue to their standard of life. The people of Period II lived in mud huts roofed with tiles and supported by wooden rafters, used storage jars, weapons etc. But no such details could be had in the case of people of Period IV, even though they seem to have given preference to stone walls rather than to those of mud. But these people seem to have been poor as the total absence of any valuables and ornaments shows. But one thing is certain, and that is the quick succession of habitations in both these periods.

III

CHRONOLOGY

The chronology of the strata and structures discussed above may be determined with the help of following evidence :—

I (i) Coins, and

(ii) Inscriptions on potsherds and other objects,

II Pottery,—including

(i) Northern Black Polished Ware, (N.B P),

(ii) Rouletted and Red Polished Ware,

(iii) Āndhra Criss-Cross Ware,

(iv) Glazed and Celadon Ware

Though there is evidence that the region around present Nasik was inhabited by man during the Palaeolithic period, at or near the site of the excavation, no evidence of this kind has been found so far The earliest occupation here seems to be on the top of the black soil This itself was formed, presumably under very humid conditions, on gravelly silt deposited during an aggradation phase Since the finds from this layer include only microliths, a painted and unpainted yellow ochre washed pottery, and no N B P or any other object of early historic period, this earliest occupation, separated by a weathered horizon, has to be assigned to a pre-N B P period The microliths include lunates or crescents, trapeze, straight edged and obliquely blunted blades Some of the pottery is definitely wheela-turned, and among the rare grey-ware, one type [Fig 3a] seems to be similar to the grey-ware urn-type of Brahmagiri IB period [1] This as well as the yellow ochre, painted ware and microliths have some distinctive types common with the similar material from Jorwe, (see below pp 147-78) where low grade bronze celts and a copper bangle were also found So this cultural stage may be placed in the Chalcolithic or Early Bronze Age To assign any precise date to this period is not possible Its duration may be from 1,500-1,000 B C to 500 B C

The second occupation took place after an interval of time How much it was we cannot guess, but the surface on which it occurred is definitely weathered The N B P appears now for the first time This is generally dated to the 4th—5th century B C But towards the later part of this period, in layer (4), occur two uninscribed Cast Copper Coins (See below p 30), and two sherds (See below p 85), which resemble the criss-cross Āndhra ware from sites in Karnataka (Brahmagirī, Chandrāvallī, Herkal) So layer (5), in which the N B P is associated exclusively with the black and black-and-red 'Megalithic' as well as the ordinary red ware, some bearing symbols which also occur on Silver Punch-Marked Coins, may be assigned to a period between 200-400 B C The limits of its later phase—Period IIB—are suggested by Āndhra criss cross sherds and uninscribed

1 *Ancient India* (*Anc. Ind.*) No 4 (1947-48) Fig 20 T 37, p 227

Cast Copper Coins and the survival of the N B P, as between 200 B C -50 A D

The next phase seems to be absent in the main trench But its presence is indicated by the occurrence of red-polished ware, some of it definitely of Roman origin, and the rouletted ware in the top layers of K W N, as well as in layers (3) and (4) of MG E N It is worth recording that very little of the 'Megalithic' ware was found in these layers Thus, both positive and negative evidence indicates a date later than the mature existence of the black and black-and-red and N B P culture at these two sites This will then be a period after 50 A D and extending probably for a century or two, that is, about 50 A D—200 A D The brick structures in K W N and MG N N might be placed in Period III or IIB

The succeeding occupation phases are represented by a series of structural remains in MG E N, and mixed debris in MG N and K W N In none of these there is an object which on stylistic or other evidence can be assigned to a period between 200 A D—1200 A D It is, therefore, presumed, for the present, that the site was abandoned during the mediaeval period Resettlement took place under the Muslims This is suggested not only by the presence of Glazed and Celadon wares and polychrome glass bangles but also by the discovery of a coin of Akbar below the wall of sub period IV in MG E N The occupation under the Mughals may have taken place towards the end of this period If so, this period may have begun as early as 1400 A D and lasted through Akbar s and later Mughals' reign in the Deccan upto 1760 when the Marathas took Nasik from them The close of this period is also attested to by a coin of Malhar Rao Gaekwad found just under the surface of MG N Thus in summary[2], the following tentative chronological sequence is proposed —

Period I —	Probably Chalcolithic or Early Bronze Age	c	500 B C—1000—1500 B C or earlier
Period II —	A Early Historic	— c	200 B C—300—400 B C
	B Early Historic	— c	50 A D—200 B C
Period III —	Roman Contact	—	200 A D—50 A D
Period IV —	Early Muslim-Mughal Maratha	— c	1400 A D—1875 A D

2 In this the Early Stone Age Period is omitted for the reason mentioned on p 6

IV

COINS

Very few coins were found Out of eight from the excavation, three are blurred and of little value From the rest, three belong to the Early Historic period, one to the Mughal, and the fifth to the Gaekwads of Baroda. These help in dating, to some extent, and with other evidence, the layers from which they emanate.

1. *A Cast Uninscribed (?) Coin*

No 199 MG N G (4) Depth 9 ft [pl V, 1. See also JNSI Vol XV, pl VII]

Metal	Copper
Size	Round, oblong, (17 mm × 15 mm × 2 mm)
Weight	4 786 grammes (nearly 74 grains)
Obverse	There are two semi circular raised signs on the left hand border, a symbol like the tree in railing in the top centre, below it an incomplete rect angle, and a vertical line to its right
Reverse	Now blank , but there might be some symbol on the right hand side, which is slightly broken

If what looks like a symbol, does not contain any letters, (e g the vertical stroke may be compared to the Asokan '*pa*') then the coin might be placed in the category of 'Cast Uninscribed Coins'

The grouping of symbols appears to be unique Separately or in other combinations, parts of the large symbols described above figure in certain Tribal coins, for instance, in coins of Audumbara and Kuninda,[1] there is a vertical stroke with a loop at the bottom turning to the right and an empty rectangle, but there is no symbol on punch-marked, Cast Uninscribed, Tribal or other ancient Indian coins, where a symbol identical with the one on the Nasik coin seems to occur. On some Kausāmbī coins, as kindly pointed out by Shri P L Gupta, occur a tree in railing, a thick wavy line and joined semi-circles. It is possible, as he suggests, that these, and what looks like an open rectangle are, indeed, parts of letters.

2 *A Cast Uninscribed Coin*

No 189 MG N.B (4) Depth 9 ft 6 in [pl V, 2]

Metal	Copper
Size	Round (though considerably broken) and thick (Diam 21 mm Thickness 8 mm)
Weight	9 528 grammes (147 grains)

1 Allan John *Catalogue of Coins of Ancient India*, (*CCAI*), pp 127, 159



2

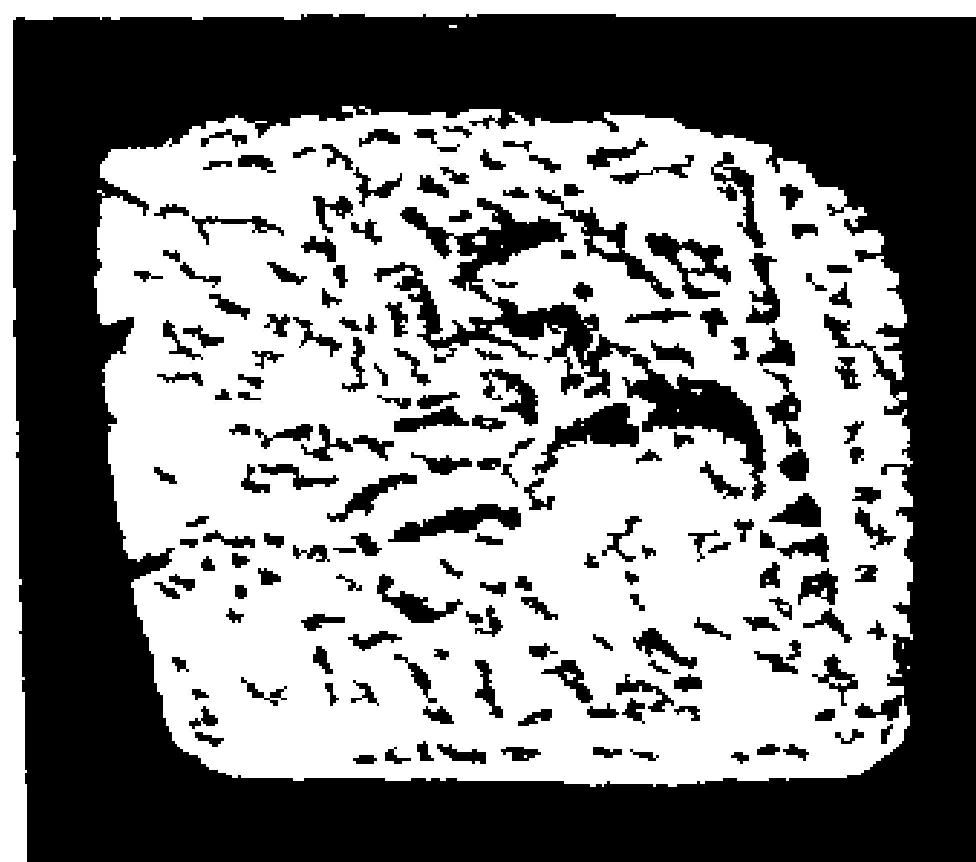


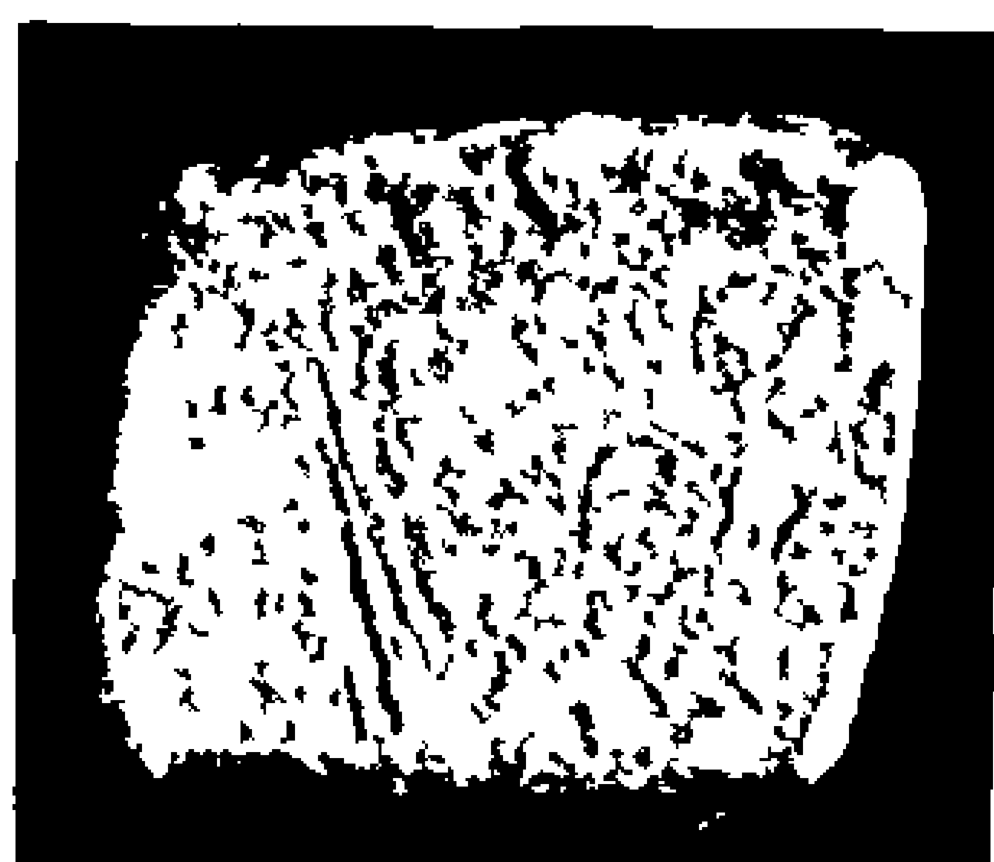
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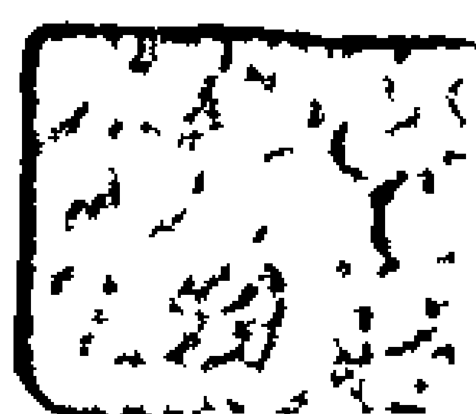


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4



6



5

Coins Cast Uninscribed Copper and Early Satavahana

(See pp 30 33)

The coin is so much corroded that it is peeling off in layers, and has a few cracks Hence it was given up as useless but a careful examination on cleaning showed a *svastika* with curved arms, just above the centre, and to its left a symbol, the upper part of which resembles an open scissors In the lower part of it again there is a fork, but only the right arm slightly curves in, while the left seems to be straight, unless it be connected with a wavy, serpent-like form to its left From the arms of the upper fork, a bud-like object seems to emerge This symbol, as kindly pointed out by Shri P L GUPTA, after carefully examining the coin and its photograph, may be like the one published by ALLAN, viz two semi-circles joined by a line thus ♊, to the left of which we may discern a small taurine It has, however, got to be pointed out that in the coin, the arms of the central symbol are angular and not rounded, as in a dumbell or in the symbol illustrated by ALLAN The reverse appears to be blank In the absence of writing, this coin may also be placed in the category of ' Cast Uninscribed Coins ' The *svastika* occurs but rarely on punch marked coins,[2] but is a common feature of later ancient Indian coins It also figures on some varieties of Andhra coins, where its arms are often straight and angular,[3] but not so rounded as in the present coin Some of the tribal coins do, however, exhibit this variety [4] On the Uninscribed Cast Coins also two of the arms of the *svastika* are rounded [5] Stylistically the form of the *svastika* suggests an early date for the coin

The other symbol, if it is correctly described, seems to be quite new—its upper part resembles the *sarpa-mithuna* symbol, but the lower is quite different It does not occur on the Tribal, Uninscribed Cast or even on Punch-marked coins

3 *Coin No 483*

MG N D(3) Depth 5 ft 2 in
Metal Copper
Shape Rectangular (15 mm × 13 mm × 3 mm)
Weight 3 161 grammes (about 52 grains)
Obverse The symbols are blurred
Reverse Faint traces of the Ujjain symbol can be seen
Not illustrated

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2 DURGA PRASAD, *JPASB* XXX (1934) *Num Suppl* pl 2

3 RAPSON *C AD*, pl I 5 6 9 13 15, pl II 26, pl III 47, pl IV, 2, pl VIII, 29 16 227 *Cf* also *JNSI*, XII pl VIII and XIII pl VI, 1 where the *svastika* appears very prominently on certain coins from Kondapur

4 ALLAN, *op cit*, p 308 pl XIX, 2 19

5 *Ibid*, p 308, pl XIX, 2, 19

4 *Coin No. 5561*

MG E N Ik(2) [pl V, 6]
Metal Copper
Size Rectangular (13 mm × 11 mm × 2 mm)
Weight 2 334 grammes (about 36 grains)
Obverse Extremely faint traces of one or two letters like /
Reverse Blank

5 *Coin (?) No 5060*

MG E N Ie(3) [pl V, 5]
Metal Lead
Size Round (Diam 13 mm × 3 mm) partly broken
Weight 2 577 grammes (about 39 ½ grains)
Obverse A cross or lotus leaf like incisions
Reverse Blank

6 *Coin No. 860*

MG E N Ie(2) [pl V, 3]
Metal Copper
Size Squarish (65 in mm)
Weight 5 349 grammes (82 ½ grains)
Obverse Elephant facing right (trunk cut off) above faint traces of Ujjain symbol, and perhaps some letters, now obliterated
Reverse Ujjain symbol on the left part of railing on the right Both these are enclosed in a square border of which one complete side and a part of the second only have come in the die struck portion The remaining part of the right hand side is peeled off

The coin may be identified as that of Sātakamni I Its symbols compare very favourably with those of the coin published by RAPSON,[6] which he attributes to King Satakamni The exact locality from which it came was not known, but it was assigned to Western India The present coin suggests that one of the localities in this region, where it was current, was Nasik [7]

7 *Coin No 5048*

MG E N Found below wall of Period IV, with a multi spouted pot [pl XIV, 1]
Metal Copper
Shape / Size Round very thick (Diameter 16 mm × 9 mm thick)
Weight About 18 79 grammes (292 grains)
Obverse / Reverse Much effaced But it can be attributed to the Mughal Emperor Akbar, according to Shri R G GYANI who kindly studied this and the coin mentioned below
Not illustrated

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6 RAPSON *op cit* p 3 pl I 7

7 For the other rare types of coins recently found on the surface of MG N, see *JNSI*, XIV, (1953) p 54, and XIII, (1951) p 53

Coin No 36

MG N G(1)

Metal Copper

Shape / Size: Pentagonal Thick (19 mm × 18 mm × 4 mm)

Weight 10 044 grammes (155 grains)

Obverse / Reverse: Much effaced still it can be attributed to Malhar Rao Gaekwad of Baroda

Not illustrated

Though the number of coins found is small, a few of them are important from the point of view of dating the finds and layers and the occurrence of certain new coin types

Of the two Cast Uninscribed Coins from MG N one is definitely of this type The attribution of the second may be regarded as provisional Since coins of these type have been dated between the 3rd and 2nd centuries B C by ALLAN[8], it will be justifiable to date layer 4 to this period Such a dating will not be inconsistent with the age of the layer arrived at from the occurrence in it of the N B P and the black and red Megalithic like pottery In fact, in the present state of Indian archaeology, when reliable data is being collected only of late, such cross dating of finds is inevitable The second important fact is the provenance Hitherto it was believed that the distribution of these coins was confined to Central India (Madhya Bharat) and the United Provinces (Uttar Pradesh) The Nasik coins would extend it for the first time to include parts of North Deccan Among their class also, the coins present two new varieties

Stratigraphical significance of the coin of Satakarni I (?) is little, since it comes from a much later layer, where it may have gone to various reasons It, however, indicates the possibility of the existence of Early Satavahana Coins on the site, in the layers assignable to this period Its value as fixing the provenance of such coin types is already pointed out[9]

The occurrence of the solitary Mughal and Maratha coins is of confirmatory value only

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8 ALLAN *op cit* Intro p LXXIX Even early part of the 4th century he does not totally rule out because before finally limiting the period of these coins to the 3rd 2nd century B C ALLAN said that these coins were probably of the same period as the Silver Punched Marked Coins

9 For other surface Satavahana coins see *JNSI* XIII p 53 and XIV p 54 See here pl V, 4

5

V

MICROLITHS

The occurrence of microliths in the basal habitation layer separated from that of the Early Historic by a weathered horizon constitutes one of the important discoveries at Nasik. The material, though not much, as the area available for digging was considerably limited, contains over 60 per cent of usable specimens. Among the latter are a complete, well worked trapeze, three lunates with fully worked back, regular and irregularly fluted cores, besides several parallel-sided flakes. Most of these have their ends broken, but it is possible that some had an obliquely blunted point, which would have given us what is called the 'penknife' blade. If so, the Nasik microlithic industry would be identical with what was later found at Jorwe and this season at Nāvḍā-toli on the Narmadā.[1] What we have not got [so far] among its cores or flakes is a thin core or flake with crested-ridge made by cross-flaking. The retouch is marked by steep vertical scars, and is usually on the back or sides, but rarely on the cutting edge. However few the number of finished tools, there is no doubt that a well-developed microlithic industry existed at Nasik, [much ?] before the Early Historic Period.

Microlithic material—including finished tools, cores, chips and nodules—recovered from all the trenches numbered 126 pieces. None was found from K.W.N Its trench and layerwise distribution is as follows :

I MG N	II MG S N	III MG N N	IV MG E N.
1 from D(5)	1 from (3)	1 from (3)	1 from (1)
21 from A(6)	10 from (4)	7 from (4)	2 from (3)
11 from B(6)			4 from (4)
54 from C(6)			
7 from D(6)			
6 from E(6)			
100 Total	11	8	7
Grand Total			126

1. See SANKALIA, H D, SUBBARAO, B, and DEO, S B, an article on 'Archaeological Sequence in Central India,' in *Southwestern Journal of Anthropology*, Vol 9, pp 343-56

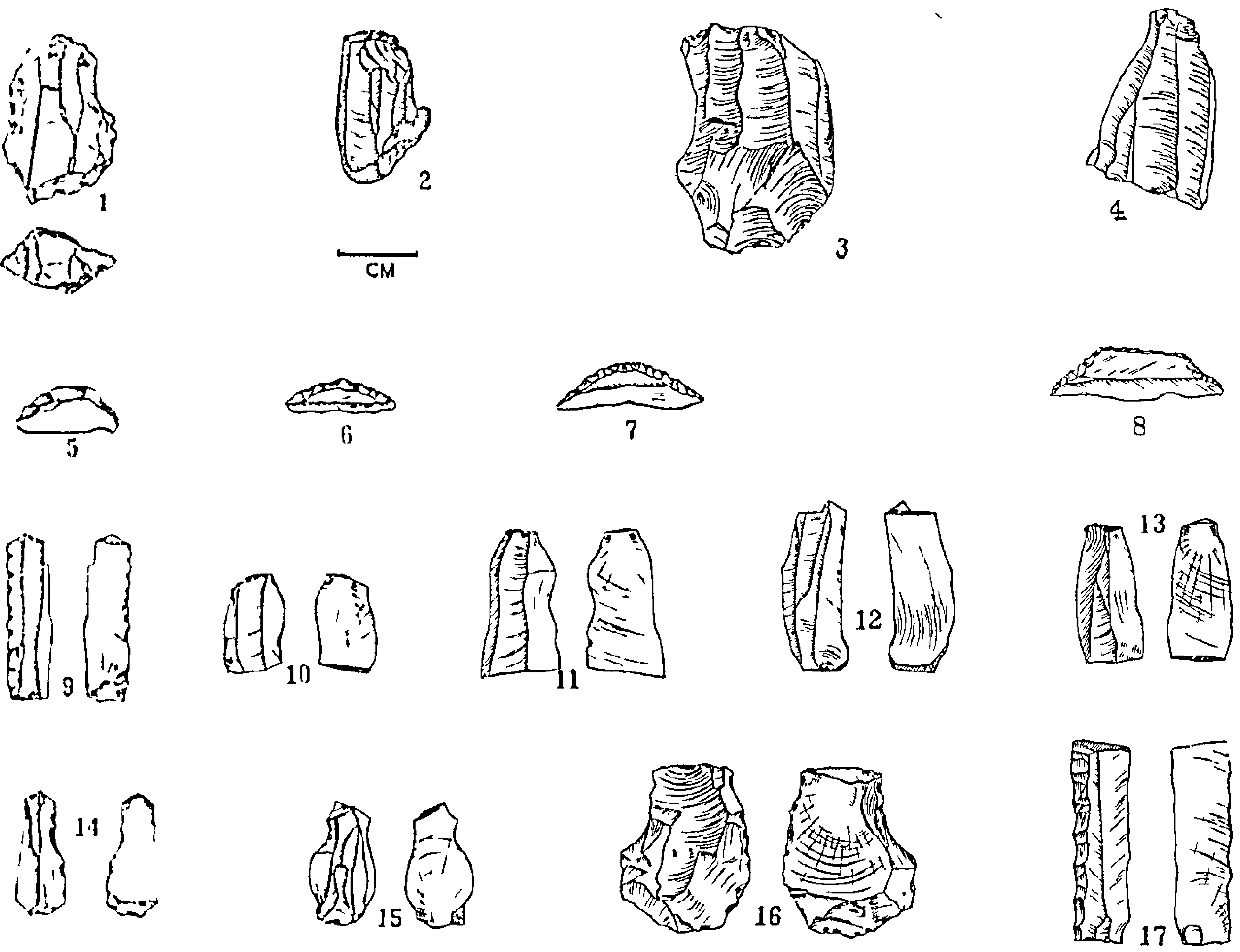


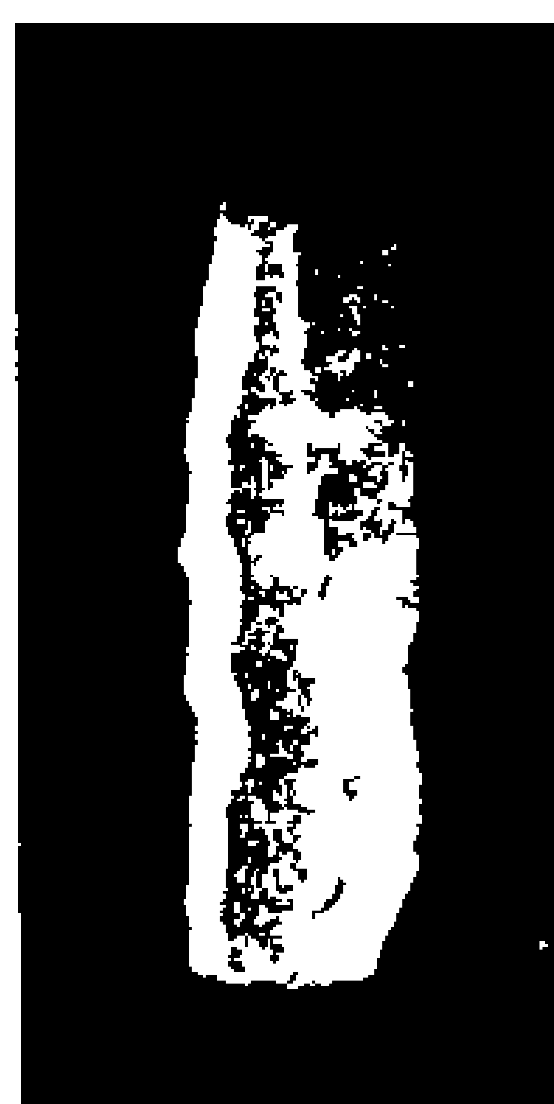
Fig a Microliths from Nasik



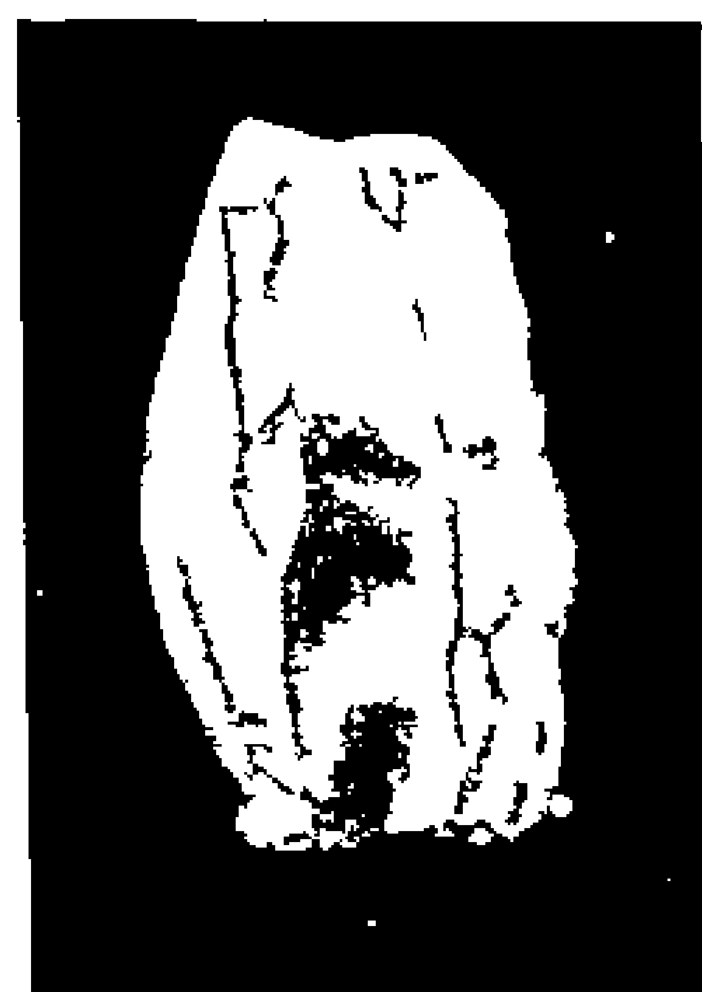
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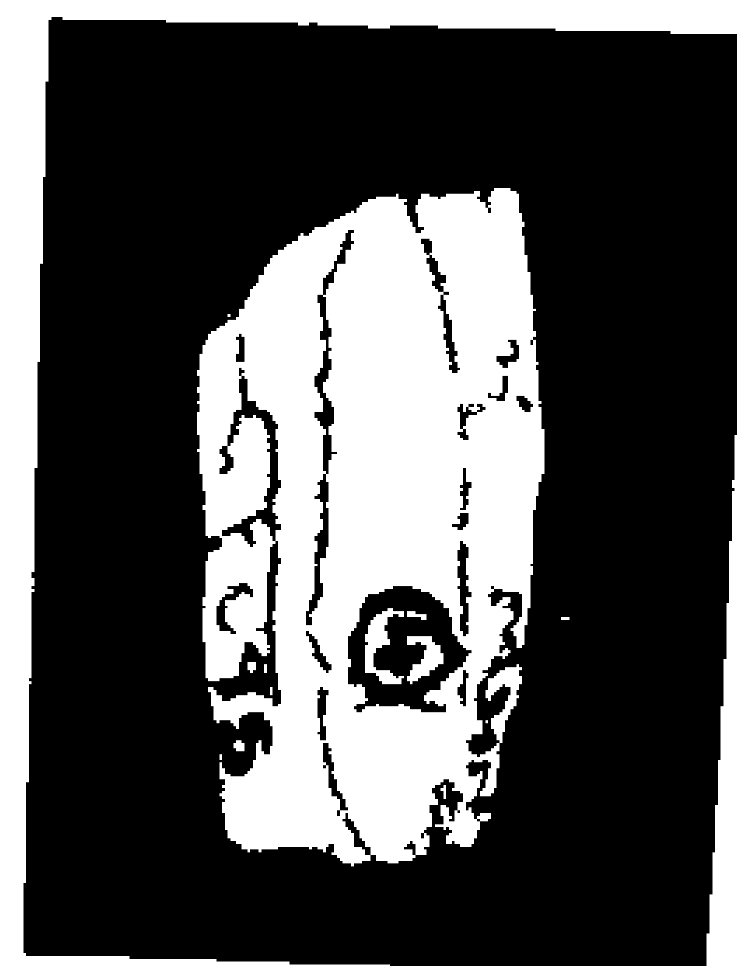
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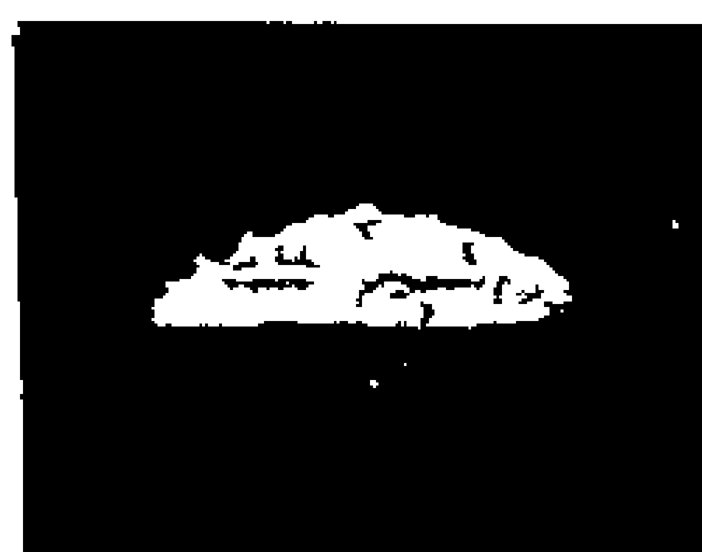
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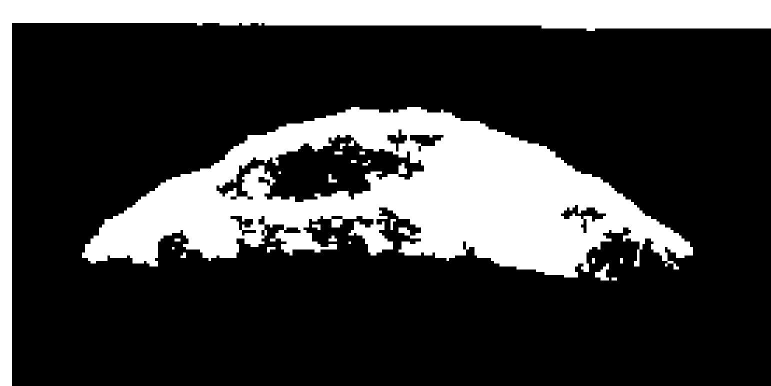
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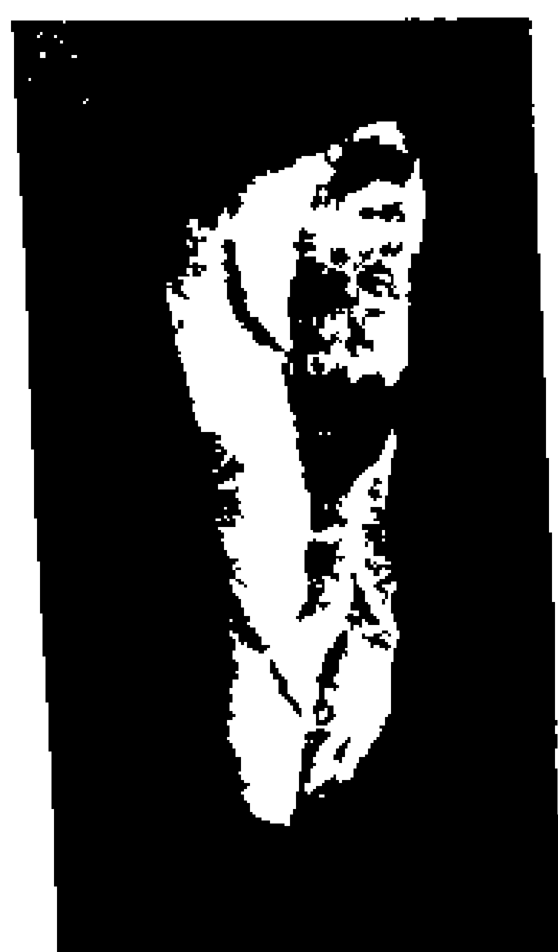
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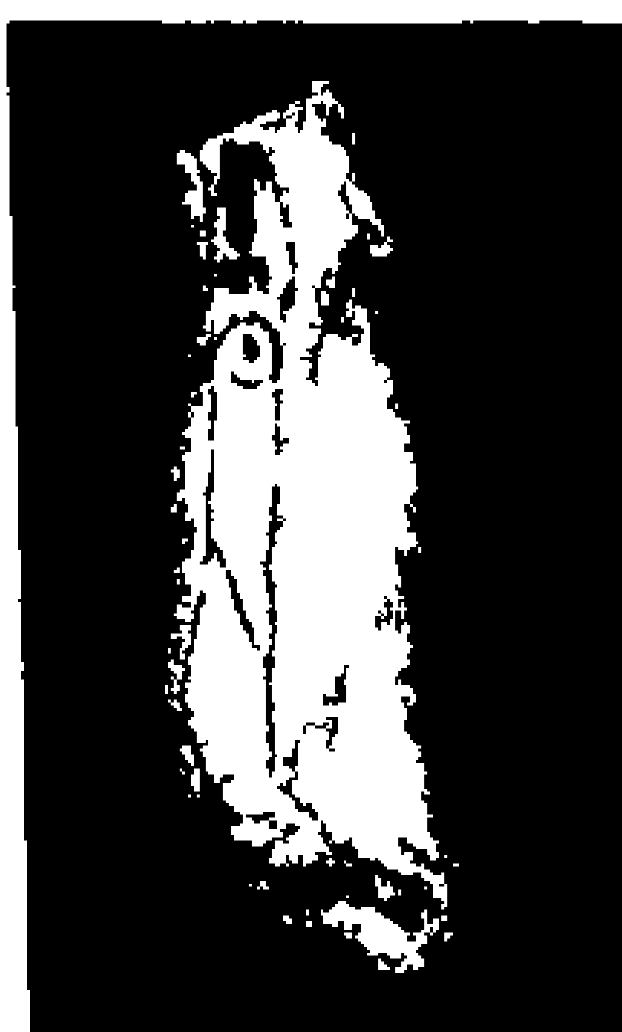


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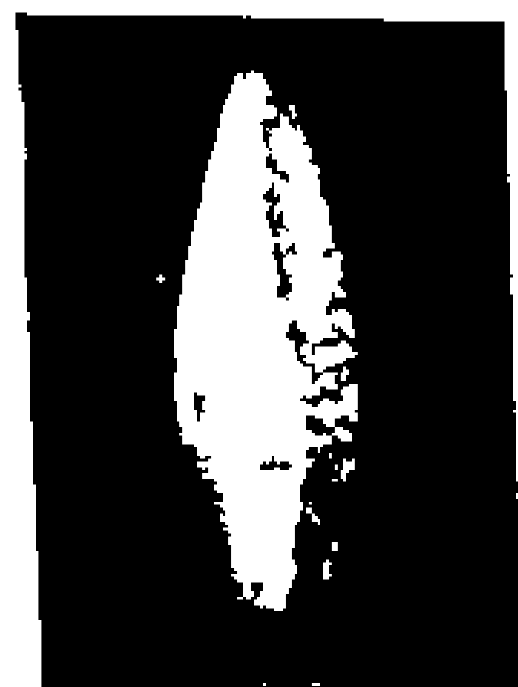
M crol ths Cores (1 3) Trap=ze (4) Lunates (5 8) and one edged blade

(see p 34 37)


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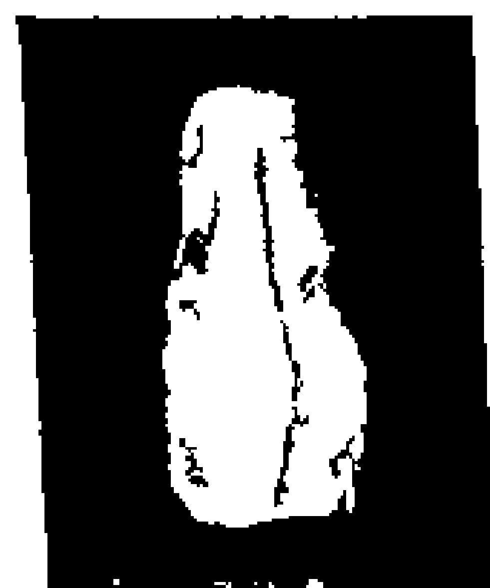

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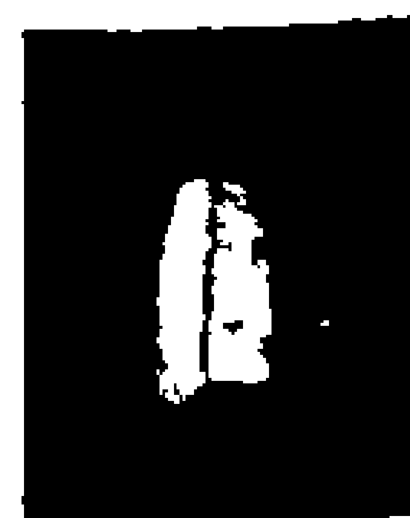

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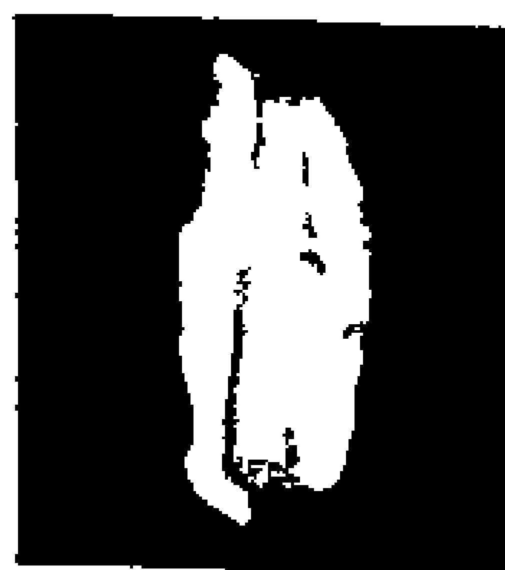

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Flakes (1 18)

(See pp 31 37)

Thus 99 in MG N 10 in MG S N and 8 in MG N N belong to the lowest layer of thick heavy black soil [2]

Out of these 126 pieces, 86 may be regarded as tools or would be tools They may be classified as follows

13 Cores [11 fluted 6 from MG N & 5 from MG S N]
5 flakes with parallal sides and mid ridge [3 from MG N and 2 from MG N N]
8 flakes with parallel sides and flat mid ridge [all from MG N]
8 flakes one edged (*unretouched*) with pseudo back [1 from MG N N and 7 from MG N]
1 flake with worked back [from MG N N]
3 Crescent blades [from MG N]
48 Irregular flakes [from MG N]

The most common material is milky chalcedony but there are a couple of cores, a few chips and two blades of green jasper, one of bloodstone and about seven chips of red and brown jasper, and one of carnelian

The most important cores, blades and flakes are described below in detail and illustrated

I *Fluted Cores*

(a) *Irregular*

No 5087 Core of medium size with one or two vertical parallel flake scars and two small horizontal flake scars possibly used as an end scraper, as there are deep flake scars and signs of use or retouch at one (lower) end 4 mm long 27 mm broad 16 mm thick Carnelian MG E N Ik(4) [Fig a 1]

No 5166 Core of medium size with two or three vertical flake scars on one side of the upper flat surface The rest has cortex 37 mm long 23 mm broad 24 mm thick Chalcedony MG N C(6) [Fig a 2]

(b) *Fluted Cores with flattish truncated base and roughly conical top*

No 5059 Here the base is naturally flattish and has cortex 27 mm long 28 mm broad 14 mm thick Chalcedony MG N E(6) [Not illustrated]

No 830 One of the best specimens 23 mm long 13 mm broad 9 mm thick Chalcedony MG N C(6) [pl VI 2]

No 5140 One of the best specimens 20 mm long 15 mm broad 16 mm thick Chalcedony MG N C(6) [Fig a 4]

No 702 One of the best specimens 28 mm long 22 mm broad 14 mm thick Green jasper MG S N (4) [Fig a 3]

(c) *Fluted Core with base and top both truncated*

No 695 Fine specimen worked on all sides 20 mm long 11 mm broad Chalcedony MG S N (4) [pl VI 3]

II *Blades*

(a) *Crescent or Lunate*

No 5175 Small lunate with straight unretouched edge and back originally steeply retouched Now the scars are somewhat effaced 12 mm long 5 mm broad 3 mm thick White agate MG N C(6) [pl VI 6 Fig a 5]

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2 Exact depth was recorded in some cases but as the soil later became very hard it was dug out in large lumps

No 5073 Very small lunate, with straight, unretouched edge, but the back finely worked by vertical retouches 14 mm long, 4 mm broad, 2 mm thick Green jasper MG N A(6) [pl VI, 5, and Fig a, 6]

No 5162 Very small lunate, with straight unretouched edge, the back worked as the previous one 18 mm long, 4 mm broad, 1 ½ mm thick Green jasper MG N C(6) [pl VI, 8, Fig a, 7]

(b) *Parallel sided blades or flakes, with a flat central scar*

Almost all are broken bits

No 5144 Blade with one edge perhaps used, slightly broken 20 mm long, 7 mm broad, about 2 mm thick at the bulbous end, but otherwise less than 1 mm thick Chalcedony MG N C(6) [pl VII, 13, Fig a, 9]

No 5160 Blade parallel sided having one of its sides, retouched Broken 11 mm long, 7 mm broad, 1 mm thick Green jasper MG N C(6) [pl VII, 15, Fig a, 10]

No 5132 Blade, parallel sided Similar to 5150, but not retouched 16 mm long, 5 mm broad 2 mm thick Section flattish triangular Greenish chalcedony MG N C(6) [pl VII, 14, Fig a, 11]

(c) *Parallel sided, but with high middle portion, though without proper mid ridge*

No 5091 Blade, similar to 5150, having one side retouched, and the other seems to have been used Broken 20 mm long, 7 mm broad, 4 mm thick at the butt end, but the rest is only 2 mm thick Section plano convex Chalcedony MG N A(6) [pl VII, 16, Fig a 13]

No 5127 Blade or flake, partly similar in shape to 5091, but otherwise the section at the broken end (middle) is flat triangular No sign of retouch 9 mm long, 7 mm broad 2 mm thick at the bulbous end but otherwise only 1 mm thick Carnelian MG N A(6) [pl VII, 18]

(d) *Parallel sided but with back worked*

No 5036 Large fragment of a parallel sided blade with the straight back finely retouched, both the ends broken Straight, sharp but unworked edge 24 mm long 6 mm broad 2 mm thick Red jasper MG N D(6) [pl VI 7, Fig a 17]

III *Trapeze*

No 5197 Small with unretouched edge, but the back and oblique sides delicately worked by vertical minute retouches 20 mm long 6 mm broad, 1 mm thick Milky chalcedony MG N N [pl VI 4 Fig a 8]

IV *Flakes*

(a) Flakes with mid ridge

(b) Flakes with ridge on one side

(a) 5135 Chalcedony MG N C(6)

Chalcedony MG N D(6)

5183 (6) [pl VII, 5]

5151 „ (6) [pl VII, 4]

5198 MG N N(4) [pl VII 8]

5010 , MG N C(6) [pl VII, 9, Fig a, 14]

No 5105 The butt end has a notch on the side as well as on top and this may have been useful for hafting Chert Has definite notches at the butt end MG N N(4) [pl VII, 12, Fig a 15]

5118 Red Jasper MG N A(6)
(b) 5009, Chalcedony. MG N C(6)
5151, Chalcedony MG N C(6) [Not illustrated]
5074, ,, MG N A(6) [pl VII, 3]

(c) *Core Flakes*

Of the several, only one is illustrated, for it is definitely further worked upon, probably with a view to getting an end or/and side scraper

No 5022 Thick core flake, having a negative bulb of percussion on one side (upper) and a positive on the under The edges of the upper, as well as of the under, particularly the thick butt end back were further trimmed with a view to getting an edge and a worked back But for some reason the back has remained very even The edge is also slightly trimmed or used 40 mm long, 34 mm broad, 16 mm thick at the broadest end Bloodstone jasper with green and red bands MG E N Ie(3) [pl VI, 1, Fig a, 16]

VI

POTTERY

General Characteristics

Stratigraphically and stylistically Nasik pottery may be grouped into four periods —

Period I — Black Soil (Proto-historic)
Period II — Post-Black Soil (Early Historic)
Period III — From Intermediate Layers (Roman Contact)
Period IV — Top Soil (Early Muslim and Maratha)

In fabric, colour and to a great extent even in shape the pottery of Period I is quite different from the pottery of Periods II, III and IV *From its* characteristic powdery surface and light orange colour, we called it Orange Coloured Pottery (O C P)[1] This field-name may be retained Hence it is not called here red ware, though in contra-distinction from the grey or black ware it can be described as red Some of these O C P were also painted in black or red, sometimes on fine well levigated light brown slip Among the latter existed vessels with spouts, and carinated pots, which do not recur in the historic period Among the ordinary O C P may be found types—like rimless bowls, dishes and vessels with collared necks—which do occur later

The chief features of Period II pottery are, as far as the fabrics are concerned, the N B P and the black-and-red burnished or polished ware

1 Some of it has retained the fine, bright ochery slip and may be superficially compared with similar ware from the lowest level at Hastinapur But unless both are scientifically examined, this resemblance need not be emphasized

These were the specialized wares, but the mass of pottery for ordinary utilitarian use was the red ware. The ordinary black was also there, but in very negligible quantity. The technological features of the N.B.P. and the black-and-red ware have been dealt with before.[2] Here it may only be pointed out that Nasik is the first site in the South where the N.B.P. has been found, and where some new or more shapes in it are available. It did not seem to be present at Kolhapur. The black-and-red or all-black has many of the characteristics of the Megalithic ware, and some of its types are identical with the similar ware found from Kolhapur; only very rarely both these sites yield the fine, thin, extremely well polished fabric of the Megalithic types, while the typical funnel-shaped bowls are totally absent. Otherwise in technique—inverted firing and burnishing or polishing over a black or black-and-red slipped surface,—there seems to be no difference.

Mention must also be made of a few sherds of the black rouletted ware of the Arikamedu type, a sherd of the lustrous Samian ware from the late mixed layers of the MG.E.N. and imitation red polished ware from the K.W.N. Though not found in well stratified deposits these indicate that Nasik had also experienced contact with the Roman World and latter's products or their imitation would be found in future excavations there.

The pottery of Period IV is mostly ordinary black or red. Both, however, present a few unique shapes. This period is also distinguished by the presence of a small amount of Chinese Celadon ware.

Explanation of symbols, arrangement and classification of Pottery

I Pottery from MG N which was extensively excavated upto the natural soil layers is made the basis for the primary grouping in types

II Pottery from other sub areas—K.W N, MG S N, MG E N, MG N N, is compared with the basic types and grouped with them

III In determining types and sub types those from layer 6 and 5, naturally come first But those from layer 6 are studied quite separately. From this layer mainly sherds were available out of which only a few types could be reconstructed

So pottery from layer 5 is used as the foundation for determining the main types current during Period II and later If similar types are found repeated in subsequent layers they are shown thus

T No 1 from layer 5
T No 1' from layer 4
T No 1'' from layer 3
T No 1''' from layer 2
T No 1'''' from layer 1

If a divergent or new feature is found in the same type, it is shown thus :

T 5A from 5 or T 5' a from 4

using the capital 'A' for sub types in Layer 5 and small 'a' for new sub types in subsequent layers

2. Cf. *Anc. Ind* No 1, (1946), pp 55 58

POTTERY

Period I

This pottery was collected mainly from the lowest—a sticky, heavy, black—soil layer in MG N, MG N N, and MG S N This layer is missing in K W N, the lowest layer there being that of gravel

Arrangement

Every piece excavated from the lowest layers in the above trenches was gathered Since MG N was dug in smaller squares it has been thought advisable, with a view to indicating the distribution per sub square, to record the number of sherds found in each of these squares The sherds from each of these squares are further classified into various groups, because it was noticed that minute distinctions in the colour, texture and thickness of the fabrics did exist, and since very few complete vessels were recovered, a detailed classification of the nature of these sherds would facilitate future studies However, where affinity or identity between any two groups of sherds from the various sub squares is apparent, it is pointed out Sherds from which shapes could be reconstructed are illustrated separately

Features

While red and its various shades—varying from dull yellow ochre or bright orange to dark crimson red—may be described as the general feature, a bright or dull orange red may be called the distinctive feature of Nasik I pottery This ware has a soft powdery surface This as well as the ordinary yellow ochre has sometimes a bright orange red slip or wash on it This seems to have been given after the vessels were fired Hence it, as well as the paintings in black or red over it are found partly effaced, and go off if rubbed This was sometimes (on account of the small number of sherds found) further decorated by simple red bands or more frequently black bands or broad bands filled in with straight or oblique strokes forming squares or double triangles So, painting in black over a red or reddish surface is the second feature of this period *This does not recur later at Nasik* Both these wares were made on the wheel, and fired, some very well indeed, as for instance [Sherd Nos 6021a 5031 5199] But in others the firing does not seem to be sufficient, for inspite of a metallic sound and grey burnt core, in some yellow ochre as well as in ochre washed sherds, the surface is powdery

The third distinctive feature of Nasik I pottery is a very light, whitish red ware Its underside is invariably found to be beaten and presents

a very uneven surface. From the sherds it is not possible to say whether it is fully handmade or only partially. With this may also be grouped a ware which is very light in weight and has a coarse texture. Its clay contained a large amount of grass which on being burnt has left many tiny crevices. It has a smooth, darkened, blackish surface. A grey ware was also in fashion. Only two sherds were found, from which and also from the reconstruction of its shape and its probable affinity with the burial urn at Brahmagiri and Jorwe, it would appear that it was meant for some specific use only.

As far as shapes of other vessels are concerned, it is difficult to say much about types and their occurrence or non-occurrence later on elsewhere. For only two partly complete vessels were found. The rest are all mostly indeterminate sherds, from which only very few rims of vessels and some bowls and dishes can be reconstructed. From among the rimless bowls, shallow rimless dishes or roasting pans, a number of medium mouthed or broad mouthed vessels, and vessels with globular body and high narrow neck, it appears that bowls, [Fig. 4, f, and Fig. 2, b], and dishes as well as the globular vessels, may turn out to be the distinctive types of Period I. Far more interesting seems to be the painted pottery. For even its few sherds indicate the existence of spouted vessels and bowls or vessels with highly carinated or angular walls which do not recur later at Nasik, but are found in abundance at Jorwe.

DISTRIBUTION OF PERIOD I POTTERY

MGN A(6)

I One sherd (No 6019) with thick greenish white paint over yellow ochre-like surface, inner side light crimson, coarse, medium thick fabric, wheelmade. (Illustrated)

II Two sherds (Nos 6020-21), with black band over a red wash, original surface of yellow ochre like colour, medium thick fabric, core light grey and yellow ochreish respectively, coarse gritty clay, inner surface powdery, not well fired. Too tiny for ascertaining whether wheel or handmade (Illustrated)

IIa One sherd (No 6021a) with remains of broad parallel running bands, filled in by criss-cross hatchings over a red wash, the primary surface being yellow ochreish and powdery, medium thick fabric, wheelmade

III Four sherds (Nos. 6026-29) with traces of red wash over a yellow ochre surface, medium thick fabric, greyish core, surface powdery Wheel or handmade uncertain, possibly wheelmade (Not illustrated)

IV. Ten sherds, bright orange colour, powdery surfaces, thin and medium fabric, not well fired Except one sherd, rest probably of wheelmade vessels. (Not illustrated).

V. Fifty one sherds of yellow ochreish ware Thin and medium fabric, though the core is greyish and the sherds give a metallic sound, indicating good firing, the surfaces are powdery (Not illustrated)

VI Forty four sherds of very thick, coarse, yellow ochreish ware The core is blackish or at times yellow ochreish, the clay very coarse, and sandy The sherds seem to be of large storage jars and similar vessels (Not illustrated)

VII Nine sherds of coarse handmade ware, medium thick, light brown smooth surface, greyish core, very light in weight (Not illustrated)

VIII Eight rim fragments (4 illustrated)

IX Three sherds (Nos 6023 25) of a thick dish or baking pan Thick fabric, smooth surface, ashy grey colour (One illustrated)

MG N B(6)

I Two sherds—one (No 6139) with a patch of black paint over orange coloured surface, medium thick fabric, powdery surfaces, the other (No 5092) has traces of a black band over orange coloured surface (Illustrated)

II Five sherds with traces of red wash over a yellow ochreous surface Four sherds of thin fabric, the fifth of medium thickness having greyish core, well fired and definitely wheelmade (Not illustrated)

III One sherd with traces of a chocolate coloured wash over a yellow ochreous surface, medium to thick fabric, greyish core, well fired (Not illustrated)

IV Eight sherds, similar to IV of A (Not illustrated)

V Thirteen sherds, similar to V of A, and definitely wheelmade (Not illustrated)

VI Seventeen sherds, similar to V, but with their under surface and the core also yellow ochreish in colour (Not illustrated)

VII Thirty nine sherds, similar to VI of A (Not illustrated)

VIII Forty two sherds, similar to VII of A (Not illustrated)

VIIIa Five sherds of vessels with beaten, uneven surfaces, probably handmade, light brown, very light in weight (Not illustrated)

MG.N C(6)

I Eight sherds (Nos 6285 92) with traces of black band over a yellow ochre surface or a surface with red wash (No 6287) Sherd (No 6285) has a very thick black band (Illustrated)

II Two sherds (Nos 6293 94) with traces of a chocolate band over a smooth orange coloured surface The underside is similar but has a powdery surface The core is dark brown and reddish (One illustrated)

III Seven sherds similar to III of A (Not illustrated)

IV Seven sherds similar to III of B (Not illustrated)

V Twelve sherds, with powdery orange coloured surfaces but greyish core (Not illustrated)

VI One hundred and twenty four sherds, similar to V of A, and some similar to VI of B (Not illustrated)

VII Three pieces (Nos 6445 47) similar to VIIIa of B One piece (No 6447) seems to have an engraving by punctured dots of a pig's head and snout (Illustrated)

VIII Eighteen rim fragments of very thin, medium thick and very thick yellow ochreish ware (Seven Nos 6459 65 are illustrated)

VIIIa Upper half of a narrow mouthed globular vessel (No 5237) with outturned rim, and light broad black bands round the narrow neck, along the shoulder, and round the belly Light ochrey coarse surfaces, medium thick fabric, wheel made (Illustrated)

VIIIb Spout of vessel (No 5763), painted with a thick broad black band along its length, and a thin one on the mouth of the spout, over a smooth brown surface, the result of a fine slipcoating over a similar coloured surface, clay well levigated, and extremely well baked Depth between 20 and 21 feet (Illustrated)

IX Nine sherds of a vessel, similar to IX in A

X Small, pointed, cylindrical terracotta object, (No 6466), possibly horn of an animal (or a leg ?) Illustrated

XI Two sherds (Nos 6467 68), including a rim fragment of thick, smooth grey ware The rim fragment seems to be a part of a wide mouthed pot, with flaring rim If so, it is comparable to similar pots (Fig 3, a) from Jorwe, and burial pot of Brahmagiri IB culture (Illustrated)

XII Four hundred and twenty sherds, similar to VI of A

XIII Forty two sherds, similar to VII of A

MGN D(6)

I Six sherds with traces of faint black band over reddish wash on orange coloured surface (Not illustrated)

Ia One sherd (No 5031) with remains of broad black bordered bands filled in with vertical and horizontal thinner lines all of equal depth in colour These meet at an acute angle a thick solid black band painted over a deep red, the primary surface being light red , wheelmade, fine fabric (Illustrated)

II One sherd with chocolate wash over a yellow ochre surface , medium thick fabric, wheelmade

III Six sherds, similar to III of A

IV Fifty sherds, similar to V and VI of A

V Twenty six sherds, similar to VIII and VIIIa of B

VI Twenty four sherds, similar to VI of A

VII Seven rim fragments (Some illustrated)

VIII One sherd (No 6604) of large thick vessel, having smooth dark red surface, the under surface is coarse, and shows inclusions of large gravel and mica fragments, and marks of grass mixture in clay (Illustrated)

MGN E(6)

I Two sherds (Nos 6605 6606) similar to III of A but in addition there also seem to be traces on the underside (Not illustrated)

II Four sherds of light orange colour ware, one sherd having a fine black core (Not illustrated)

III Two sherds of light grey ware core also greyish (Not illustrated)

IV Two sherds of handmade, very light pottery similar to VII of A (Not illustrated)

V Four large sherds of thick Ranjan (storage jar) or similar vessel (Not illustrated)

MGN. N (4) = (6) of MGN

I One sherd (No 6621) having remains of thick black bands forming an acute angle over a red wash, the primary surface being light brown , medium thin fabric well baked and wheelmade (Illustrated)

POTTERY

Ia One sherd (No 5199), fragment of a vessel with carinated shoulder, having two thin black bands along the carination, and remains of three similar but oblique strokes meeting at an acute angle over a red wash, the primary surface being light red Fabric etc similar to I above. (Illustrated)

Ib One sherd (No 5200) of a thick walled vessel, having a red slip over a powdery surface This was further painted with black bands, now almost effaced The underside is smooth but powdery Wheelmade (Illustrated)

II Seven sherds, similar to III of A

III Twenty seven sherds, similar to VI of B

IV Fourteen sherds, similar to V of A.

V. Thirty three sherds of fine orange coloured ware, similar to IV of A

VI Fifteen sherds of thick and medium thick, beaten, light red pottery, with very irregular surface, particularly inner Similar to VIIIa of B Possibly it is wheel-made, but beaten with hand, as there are grooves on the outside of the illustrated piece (One illustrated)

VIa Seven pieces of a pottery similar to VI but dark *red in colour (Not illustrated)*

VII Six fragments of rims, yellow ochre ware (Four illustrated)

VIII Sherd (No 6732), probably a large rimless bowl, with a slightly incurved top, now broken, dark red, medium thick, coarse fabric containing a large amount of lime concretions, smooth externally, and perhaps polished along the rim which appears glossy, wheel or handmade uncertain This is the only piece from the entire excavation (Illustrated)

IX Sherd (No 6733) of a thick round bottomed, coarse yellow ochre ware

X Two sherds (Nos 6734 5) of thick orange coloured ware one having grooves on the inner side, the other (No 6735) on the outside The latter seems to be part of a regular design, consisting of a broad band of thinly incised grooves joined by two obliquely incised ones (Illustrated)

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pl X 1 9

The following are illustrated

1, *top*, Sherd of a vessel with beaten, uneven surface light brown, handmade No 6445, MG N C(6)

1, *bottom, left*, do do

1, *bottom, right* do do No 6709 MG N N (4)

2, *left*, Sherd with buff paint over yellow ochre like surface inner side light crimson, coarse, medium thick fabric, wheelmade No 6019, MG N A(6)

2, *right*, Sherd, rim fragment of yellow ochre ware powdery surfaces MG N A(6)

3 Sherd, with traces of dark red slip over yellow powdery surface, internally and externally No 6622 MG N N (4)

4 Sherd, underside coarse and showing inclusions of large gravel and mica fragments, and marks of grass mixture in clay No 6604, MG N D(6)

5 Sherd of a vessel with beaten uneven surface, showing an engraving by punctured dots of a pig like head and snout (?) No 6447, MG N C(6)

6 Sherd, probably rimless bowl, showing glossy red border, medium thick coarse fabric containing a large amount of lime concretions wheel or handmade uncertain No 6732, MG N N (4) [See also Fig 2, e]

7. Sherd, with deep incised mark, on a light red, coarse surface, blackish core No 6276, MG N B(6) [See also Fig 1, k]

8 Sherd, with thick black band over a yellow ochre surface No 6283, MG N C(6)

9 Sherd, rim fragment of a grey ware No 6167, MG N C(6) [See also Fig 3, b]

pl IX, 1 9

1 Sherd with traces of a chocolate band over smooth orange coloured surface No 6293, MG N C(6)

2 Sherd of a thick walled vessel having a red slip over a powdery orange coloured surface This was further painted with black bands, now almost effaced No 5200, MG N N (4)

3 Fragment of a vessel with carinated shoulder, having two thin black bands along the carination, and remains of three similar but oblique strokes meeting at an acute angle, over a red wash, the primary surface being light red No 5199, MG N N (4) [See also Fig 1, c]

4 Sherd, neck portion of a vessel having a thick black band over a smooth red slipped surface M G S N (4)

5 Sherd with remains of thick black bands forming an acute angle, over a red wash, the primary surface being light brown No 6621, MG N N (4)

6 Spout with slightly tapering end It is painted with a thick broad black band along its length, and a thinner one on the mouth, over a smooth brown surface, the result of a fine thick slip over a similar coloured surface, clay well levigated and extremely well baked No 5763, MG N C(6), between 20 and 21 feet [See also Fig 1, d]

7 Sherd with black band over a red wash No 6021 MG N A(6) [See also pl IX, 5]

8 *left*, Sherd with remains of broad, black and parallel running bands, filled in by criss cross hatchings, over a red wash, the primary surface being yellow ocherish, medium thick fabric, wheelmade No 6121a, MG N A(6) [See also Fig 1, b]

8 *right*, Sherd with remains of broad black bordered bands filled in with vertical and horizontal thinner lines These meet at an acute angle a thick solid black band painted over a deep red, the primary surface being light red, wheelmade, fine fabric No 5030 MG N D(6) [See also Fig 1, c]

9 Sherd with traces of a black band, over orange coloured surface No 5092, MG N B(6)

pl VIII, 1 5, and Figs 1 2

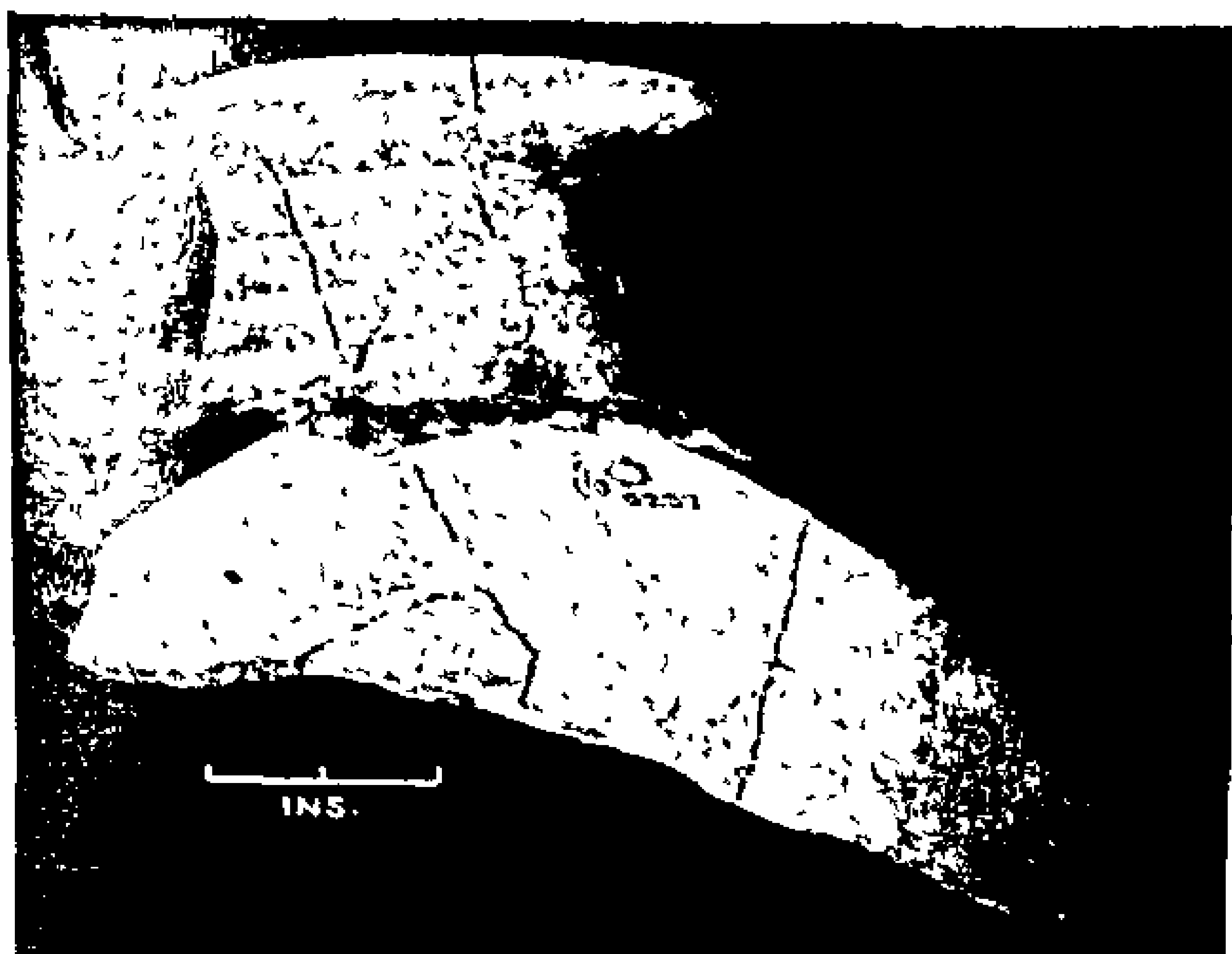
1 Upper half of a narrow mouthed globular vessel with outturned rim, and light black broad bands round the narrow neck along the shoulder, and round the belly Light ochreous, coarse surface, medium thick fabric, wheelmade No 5237, MG N C(6) [See also Fig 1, a]

2 Sherd with traces of black bands over surfaces having a red wash No 6287, MG N C(6)

3 Globular vessel with a narrow neck having straight sides, but top broken, so that no idea can be had of the rim Coarse, brownish surfaces, wheelmade Probably the neck was coated with an orange coloured paint, but there are no traces of the paint or wash on the body No 5238 MG N D(6) 21 feet [See also Fig 2, a]

4 Sherd with a patch of black paint, over orange coloured surface No 6139, MG N B(6)

5. Sherd with black band over a red wash Original surface of yellow ochre like colour No 6020, MG N A(6) [See also pl IX, 7]

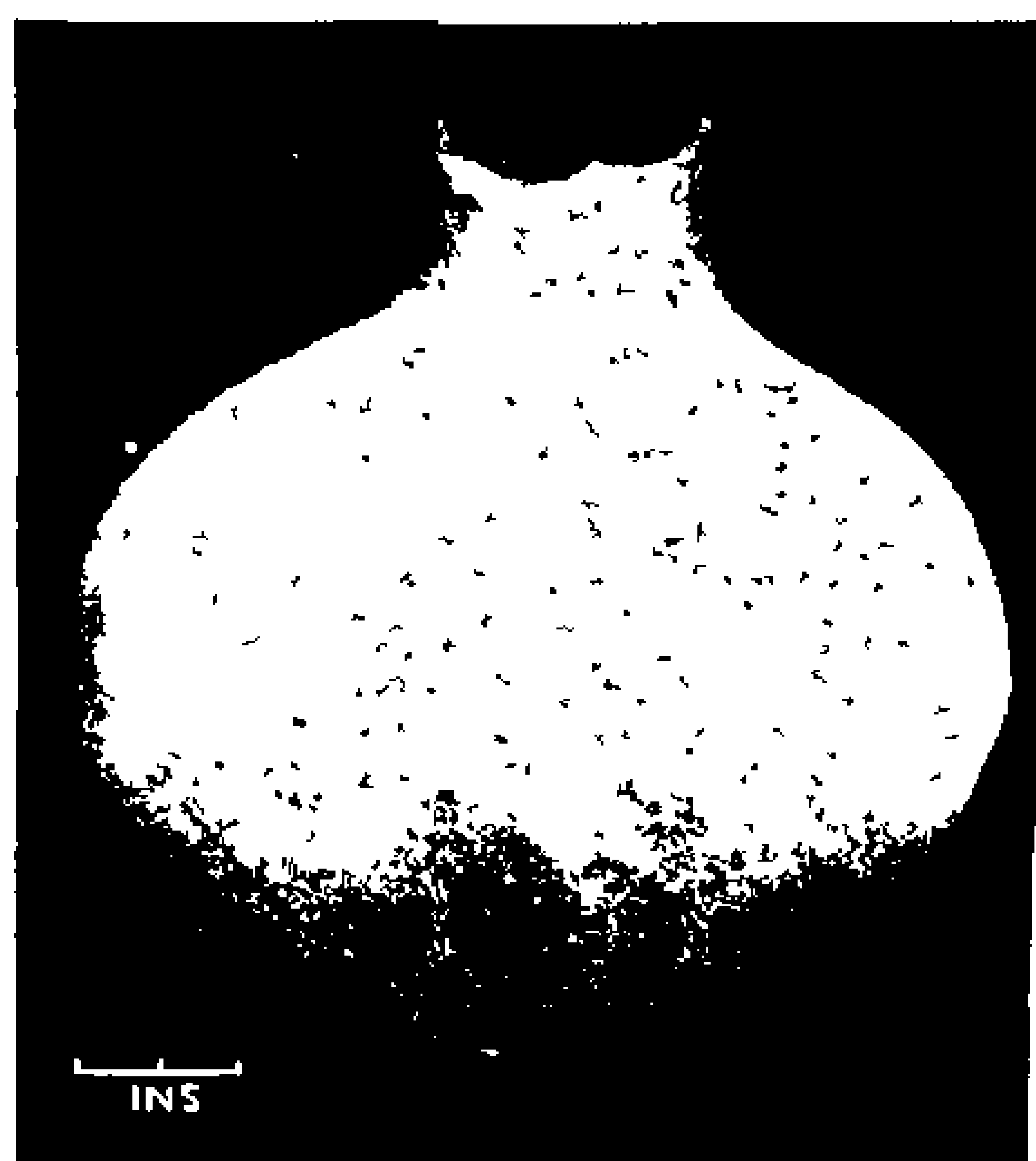


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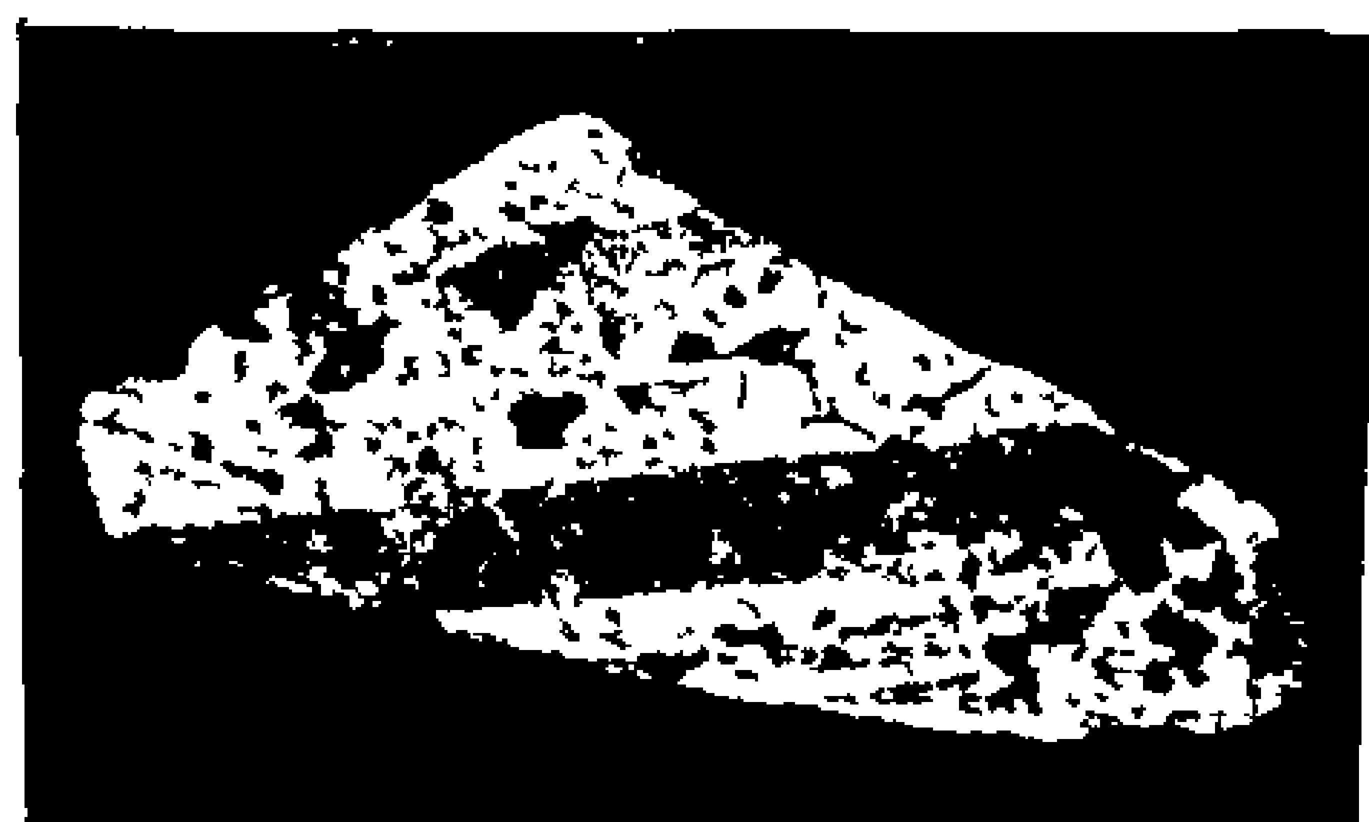


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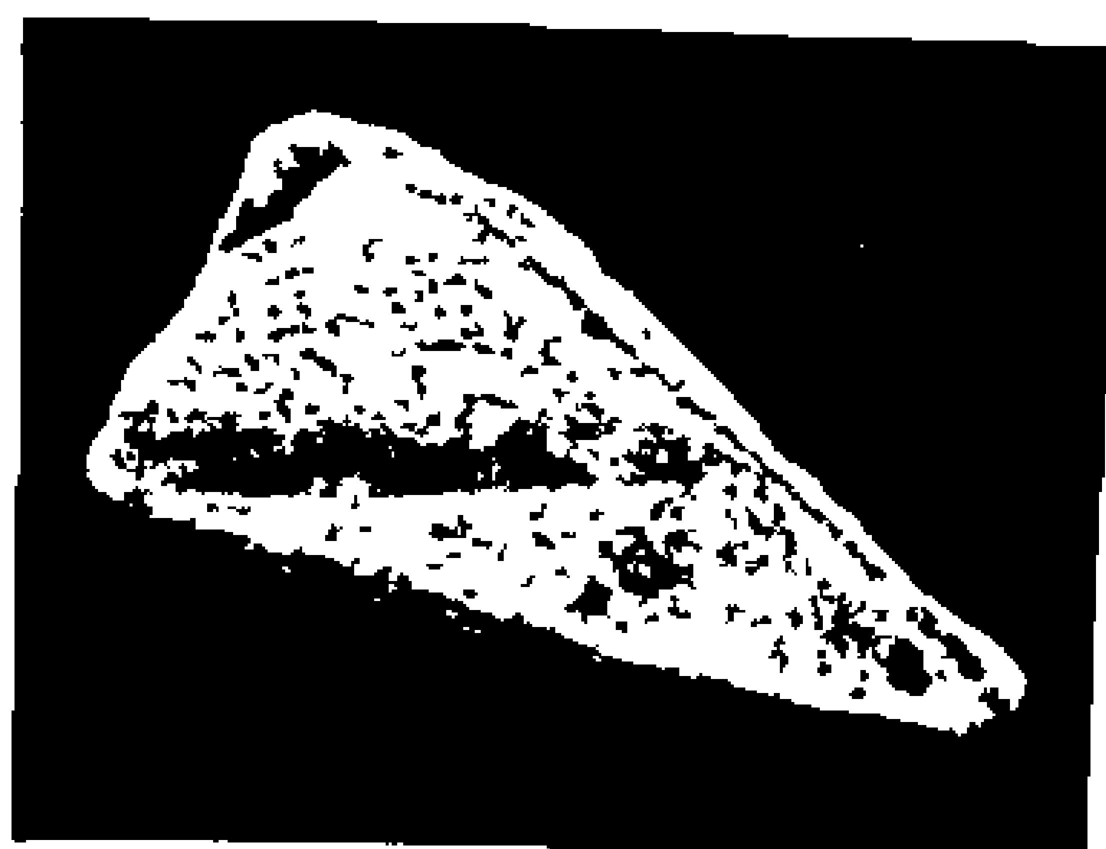
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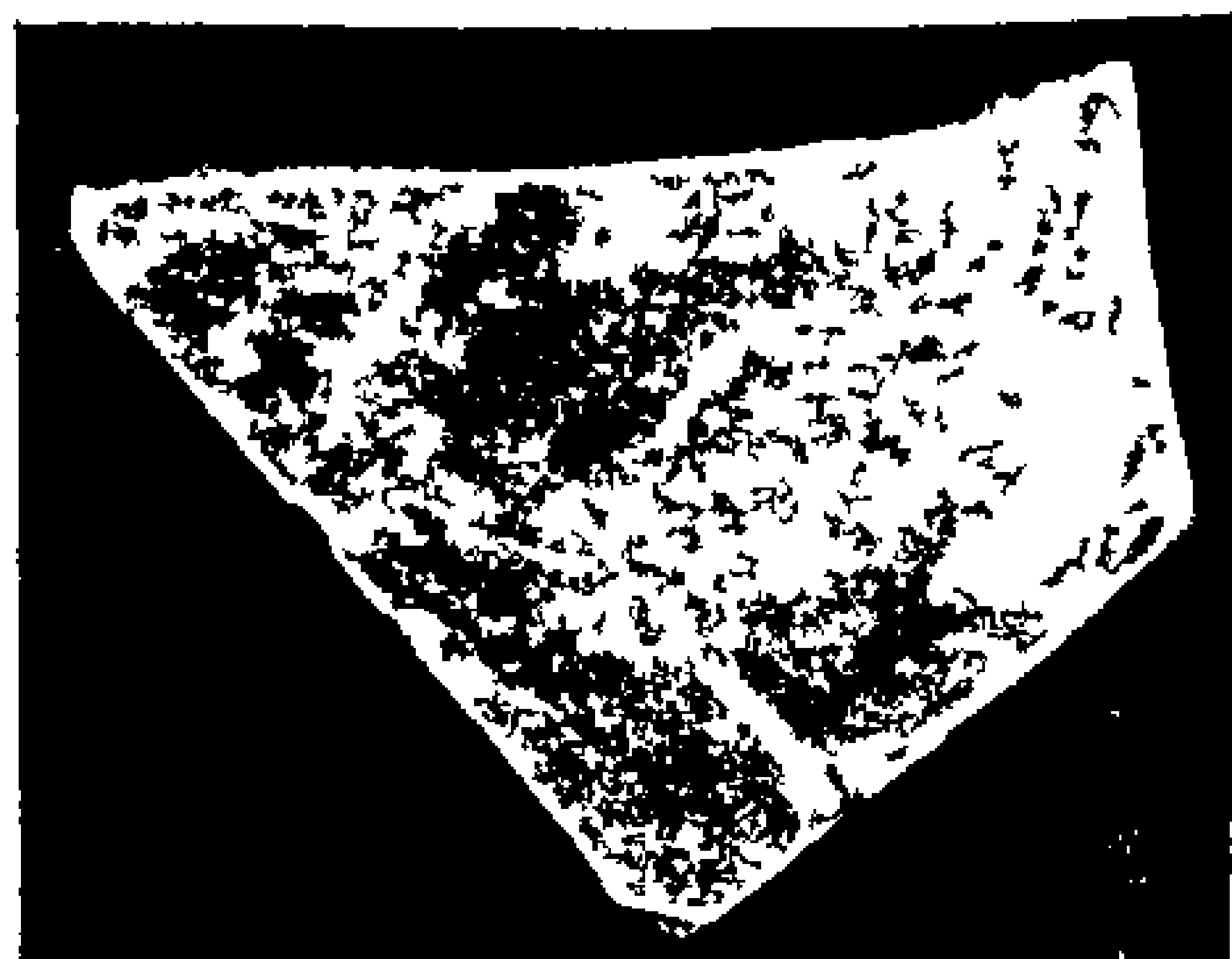
Painted and Ochre (orange) coloured Pottery (1-5). Period I

(See pp. 53, 54, 56, 67)



1





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3



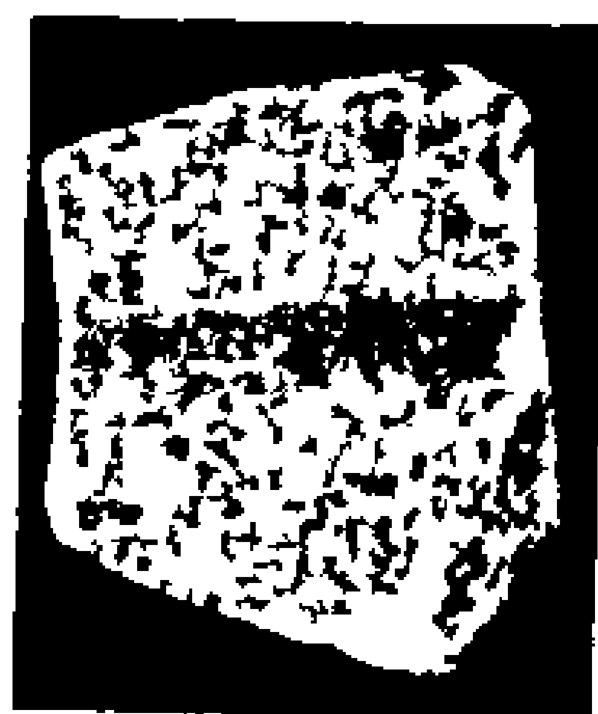
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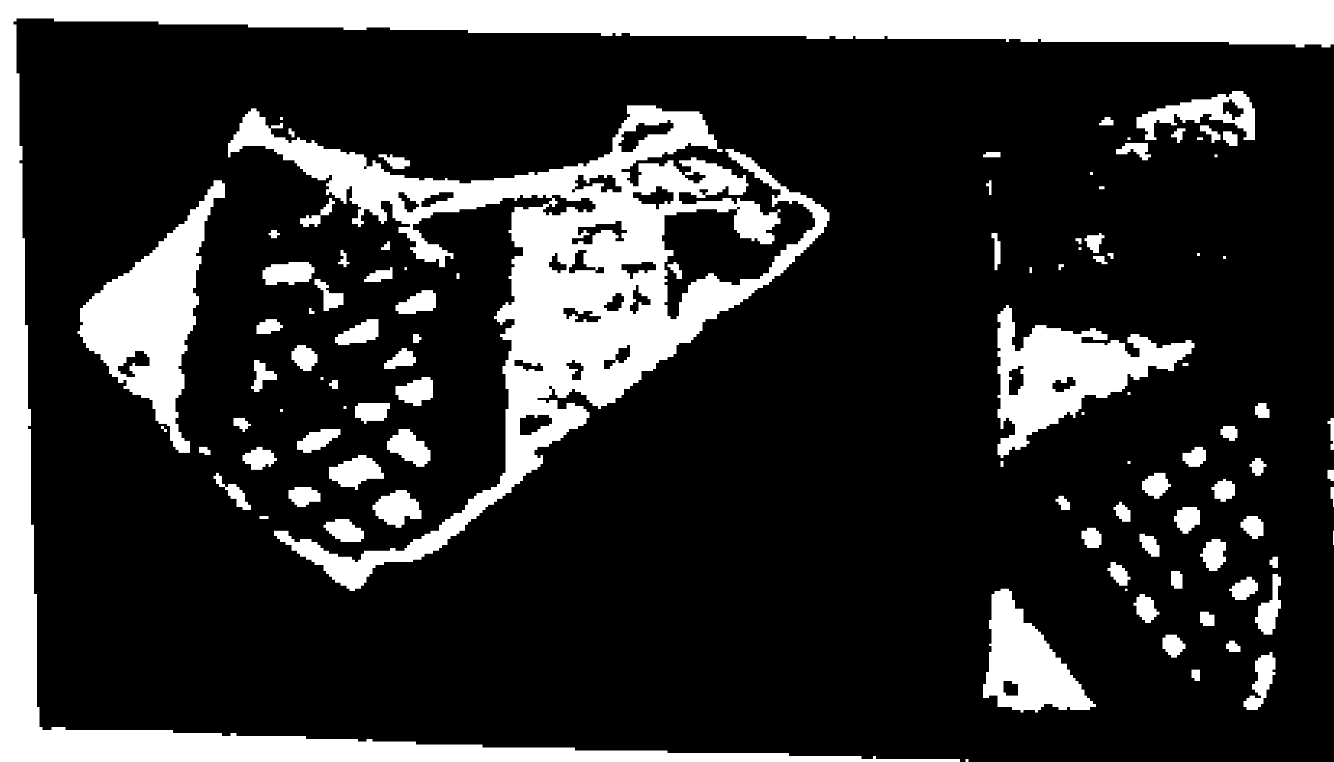
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9

Painted Pottery (1-9) Period I

(See p. 44)

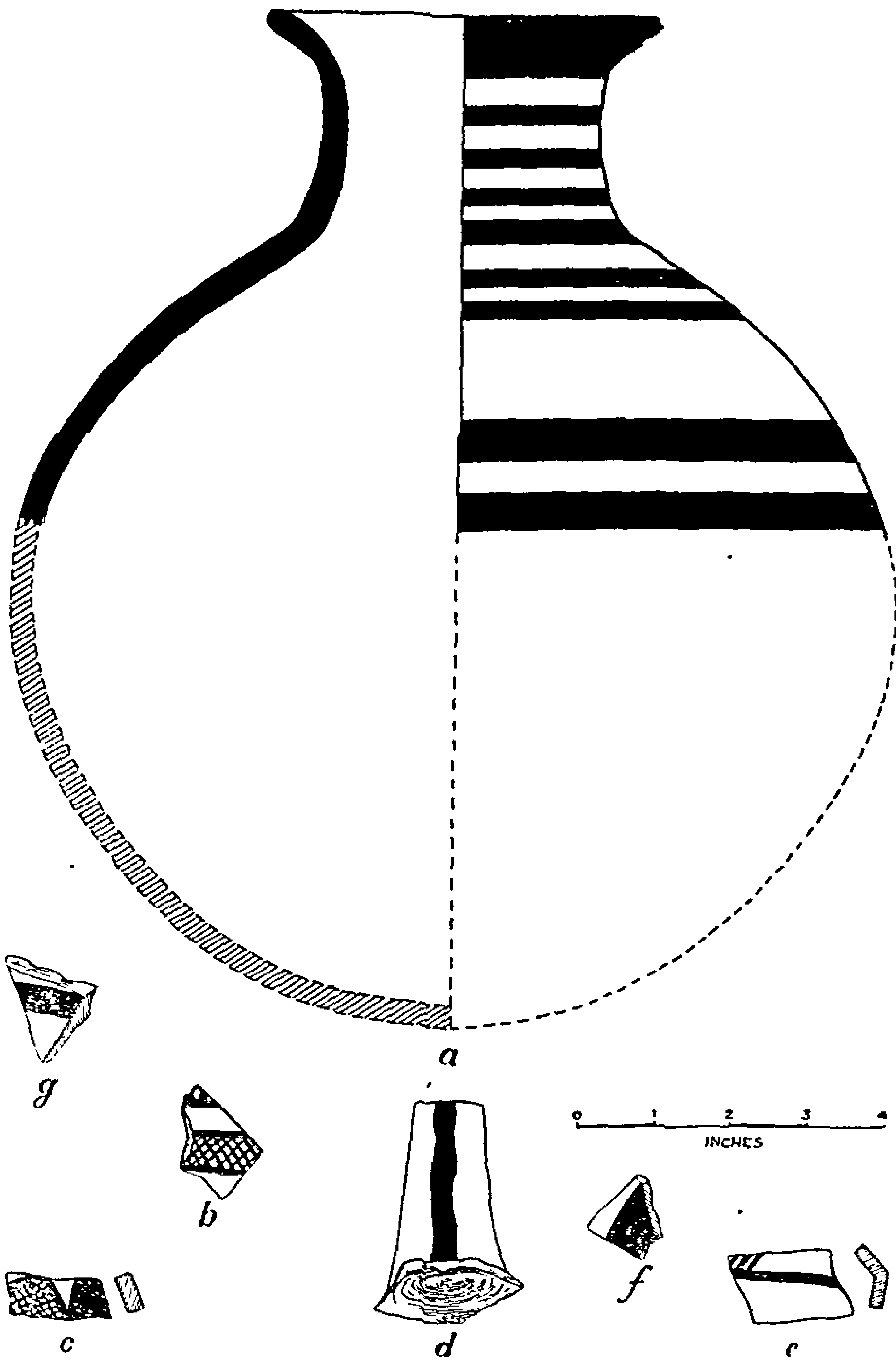
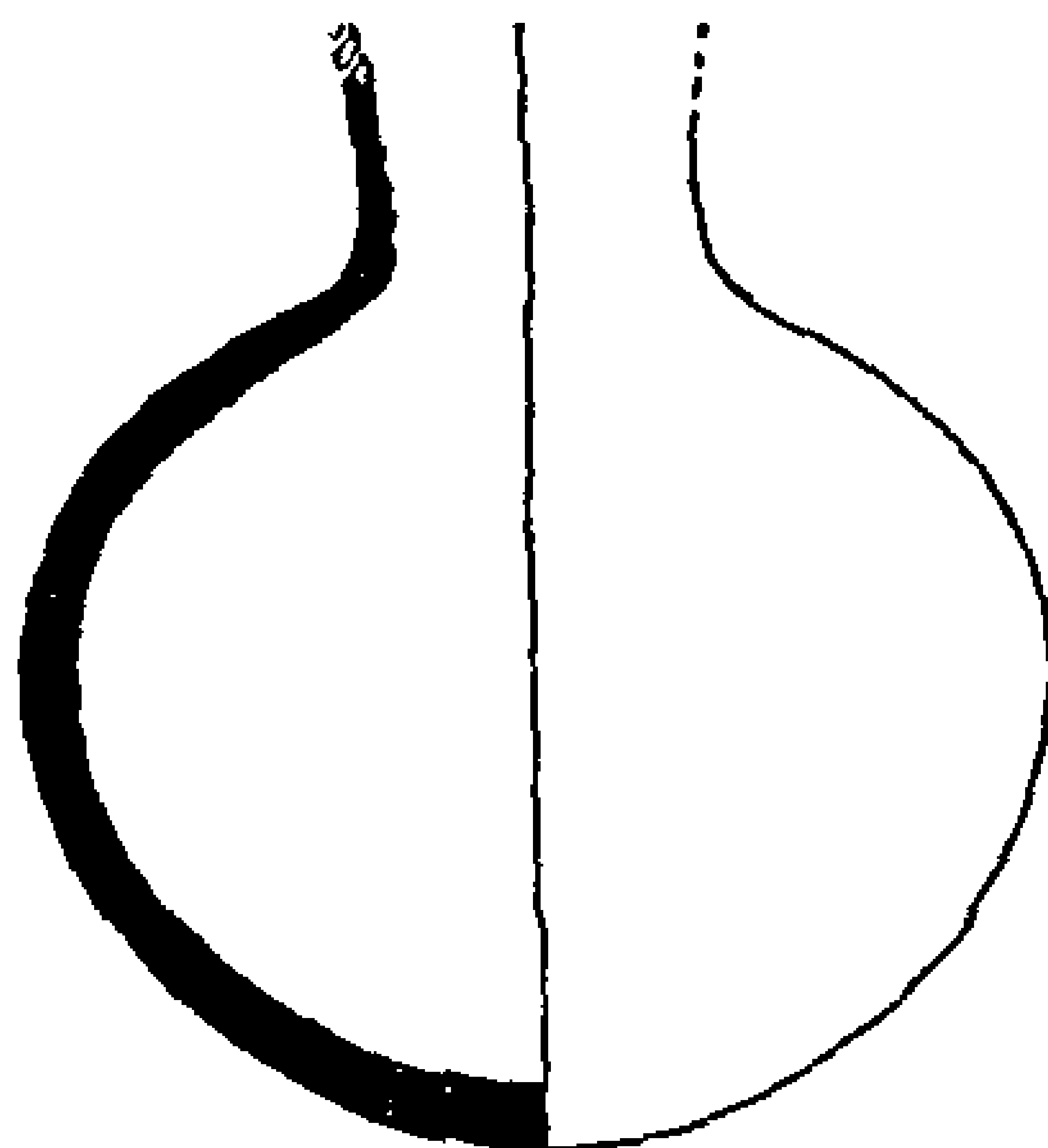
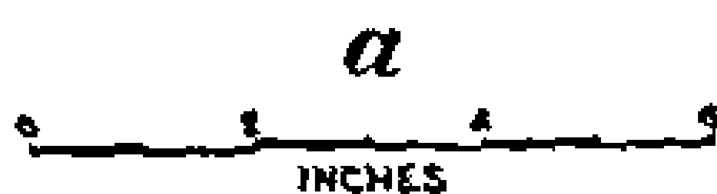
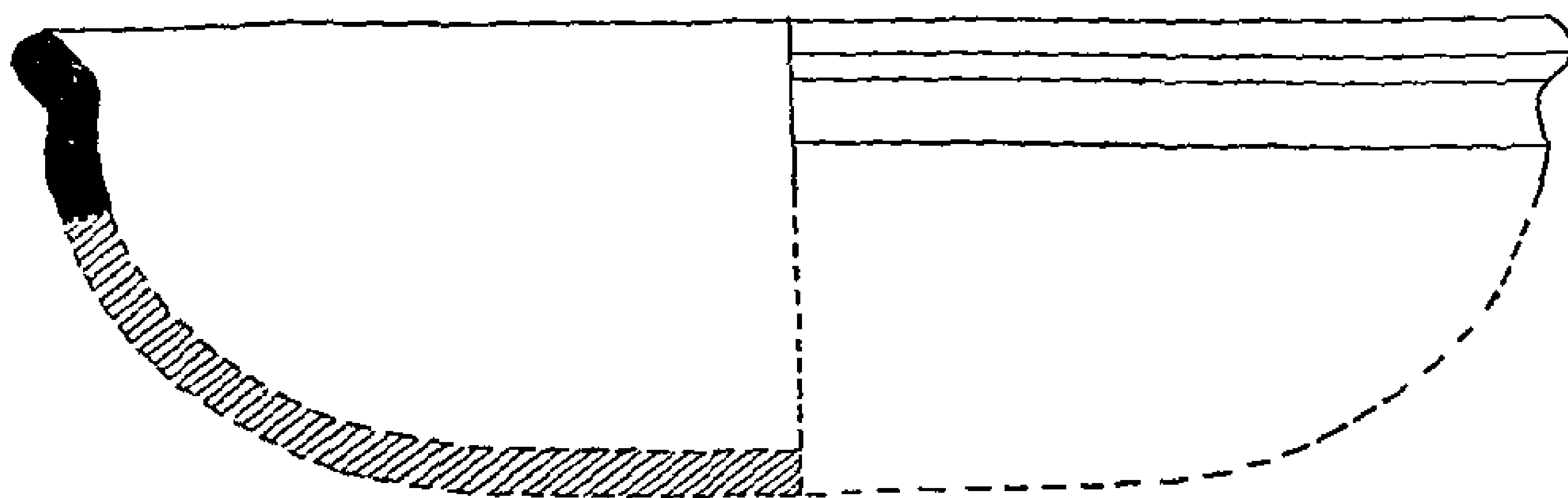


Fig 1, Painted Pottery, Layer 6, Nasik, Period I

(See p 45)







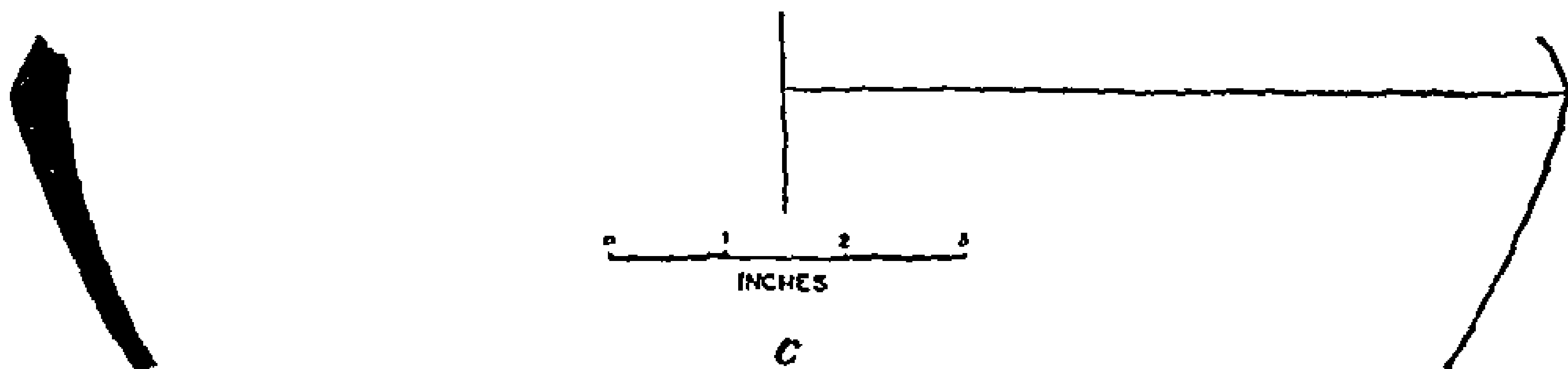




Fig 2 Pottery Types Layer 6 Nasik Period I

(*See p 45*)

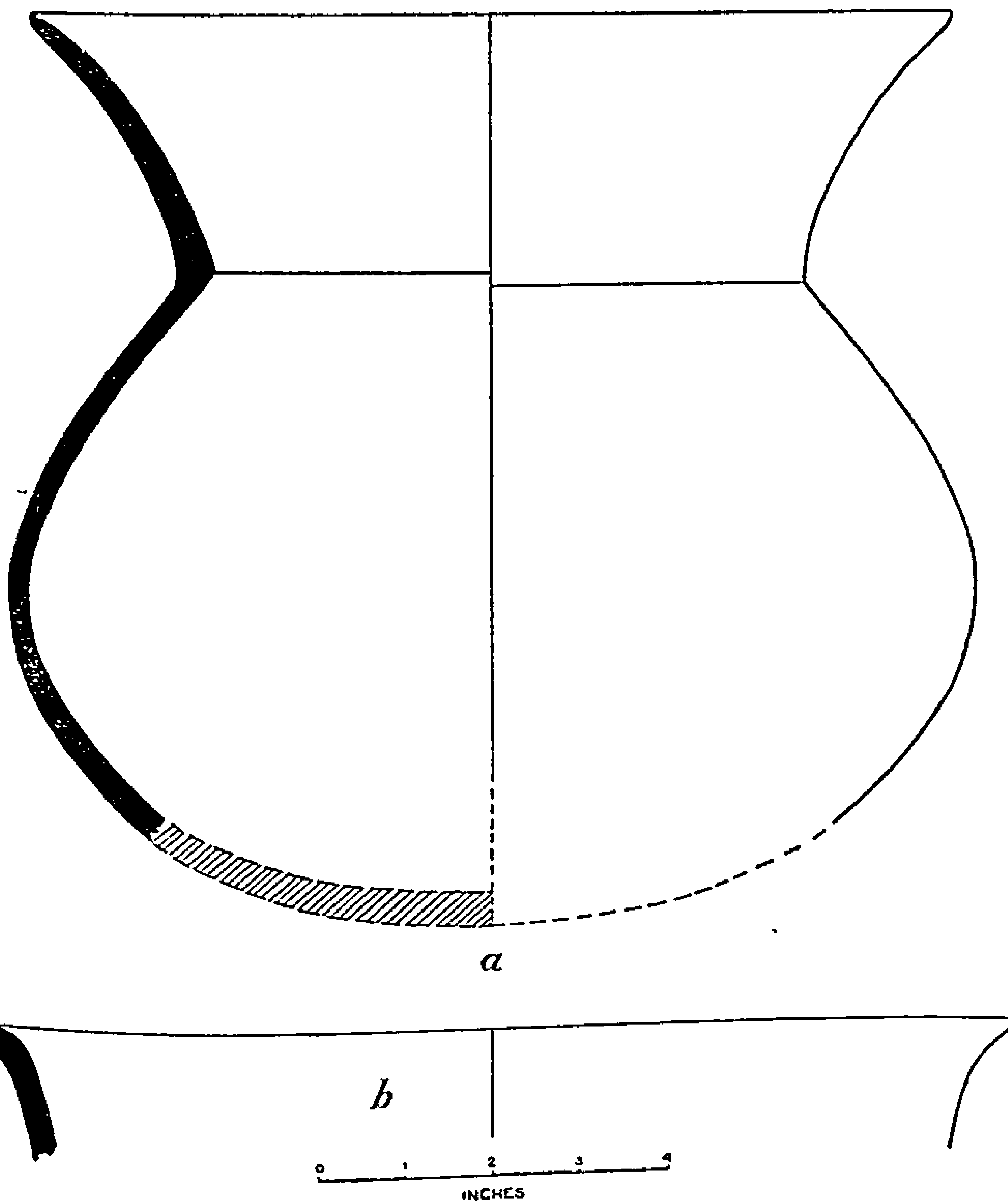


Fig 3 Pottery Types, Grey Ware, (a) from Jorwe (b) from Layer 6, Nasik, Period I
(*See p* 45)

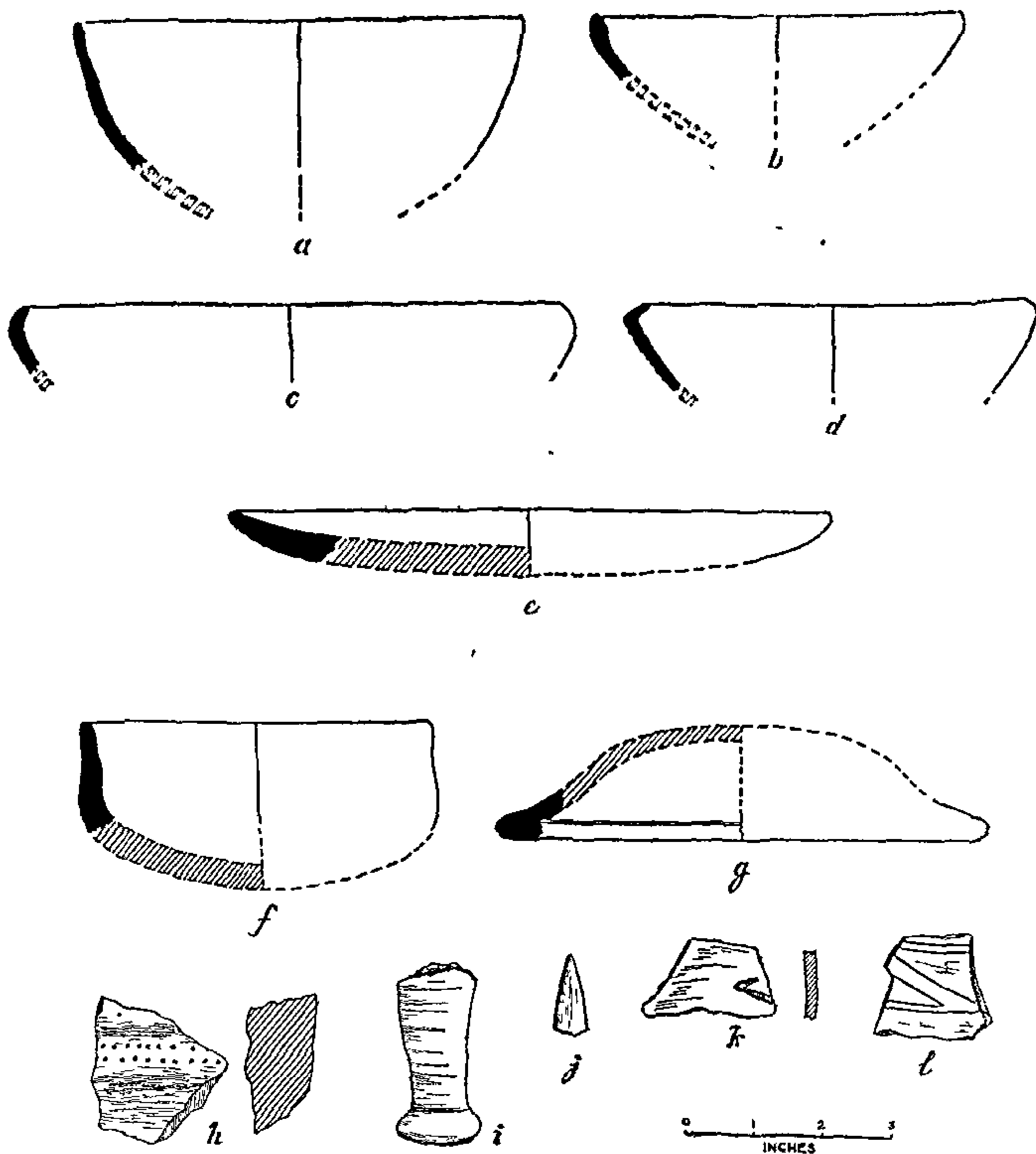


Fig 4 Pottery Types Bowls Lids Dishes Layer 6 Nasik, Period I
(See p 45)

POTTERY

Fig 1, a g, and pl IX

1a Painted narrow mouthed globular vessel [See also pl VIII, 1]

1b Painted sherd with criss cross pattern between two horizontal bands [See also pl IX, 8, left]

1c Painted sherd with remains of broad black bordered bands filled in with vertical and horizontal thinner lines [See also pl IX, 8, right]

1d Painted spout with slightly tapering end [See also pl IX, 6]

1e Painted fragment of a carinated vessel [See also pl IX, 3]

1f Painted sherd [See also pl IX, 9]

1g Painted sherd [See also pl IX, 4]

Fig 2, a c

2a Narrow mouthed globular vessel [See also pl VIII, 3]

2b Fragment of a large, broad based bowl, having a rim hold made by a slight concavity Thick yellow ochre ware No 6599, MG N D(6)

2c Sherd, probably of a rimless bowl with incurved edge, now broken, dark red, medium thick, coarse fabric [See also pl X, 6]

Fig 3, a b

3a Large burial urn like vessel with flaring rim and rounded bottom Grey ware, smooth, thick fabric, from Jorwe See below and pl XXXV, 1
[Cf Brahmagiri,[1] *Anc Ind* No 4, pl CVIII, A, Fig 20 T 37, p 227]

3b Rim fragment of thick smooth grey ware [See also pl X 9]

Fig 4, a l

Pottery Types Bowls Dishes Lids and Decorated sherds

4a Fragment of a rimless, round based bowl coarse gritty grey ware wheelmade No 6278, MG N B(6)

4b Fragment of a rimless narrow based bowl coarse gritty grey ware wheelmade No 6277, MG N B(6)

4c Fragment of a rimless bowl or shallow dish with incurved edges, coarse wheel made No 6602, MG N D(6)

4d Fragment of a rimless bowl with incurved edges coarse light dull red ware, handmade No 6601, MG N D(6)

4e Fragment of a thick shallow dish or baking pan (*tava* like vessel) smooth ashy grey fabric No 6023 MG N A(6)

4f Fragment of a bowl with a thick and slightly bulging lower part broad rounded base and almost straight sides bright orange coloured ocherous ware No 6001, MG N A(6)

4g Probably fragment of a lid yellow ocherous ware No 6597 MG N D(6)

4h Sherd with raised band incised with tiny holes thick yellow ochre ware No 6275, MG N B(6)

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1 Our impression of this similarity in fabric and type between Brahmagiri Jorwe and Nasik was further confirmed by Shri B B LAL Shri B K THAPAR and Shri N R BANERJI of the Archaeological Department of India all of whom had the opportunity to handle the Brahmagiri as well as the Nasik-Jorwe material

4i Broken terracotta handle or stand, smooth yellow ochre surface, smoky core No 6281, MG N B(6)

4j Small pointed, cylindrical, terracotta object, possibly horn of an animal or leg No 6466, MG N C(6)

4k Sherd with deep incised mark (See also pl X, 7)

4l Sherd of a thick orange coloured ware with a regular incised design of thin grooves joined by a thick oblique groove No 6735, MG N N (4)

Fig 5, a o

Pottery Types Rims of Medium and Broad Mouthed vessels

5a Fragment of a rim with flaring top yellow ochre ware No 6281, MG N B(6)

5b Fragment of a rim with slightly flaring top yellow ochre ware No 6460, MG N C(6)

5c Fragment of a rim with slightly flaring top, yellow ochre ware No 6282, MG N B(6)

5d Fragment of a broad mouthed, extremely thin rimless vessel with incurved sides one half of the outer surface having orange coloured ochre wash No 6464, MG N C(6)

5e Fragment of a vessel with almost straight narrow neck, and slightly flaring rim, yellow ochre ware No 6462 MG.N C(6)

5f Fragment of a vessel with a narrow mouth and a flaring rim yellow ochre ware No 6459, MG N C(6)

5g Fragment of a vessel with slightly externally beaded rim, yellow ochre ware No 6279, MG N B(6)

5h Fragment of a vessel with thick beaded rim, yellow ochre ware No 6465 MG N C(6)

5i Fragment of a vessel with well beaded rim, yellow ochre ware No 6600, MG.N D(6)

5j Fragment of a vessel with an externally beaded rim having a slight drip yellow ochre ware No 6007, MG N A(6)

5k Fragment of a vessel with a rim having an external angular drip projection yellow ochre ware No 6008 MG N A(6) *This shape does not recur later*

5l Fragment of a vessel with slightly externally beaded rim having a drip yellow ochre ware No 6463, MG.N C(6)

5m Fragment of a broad mouthed vessel with a broad externally beaded rim, yellow ochre ware No 6003 MG N A(6)

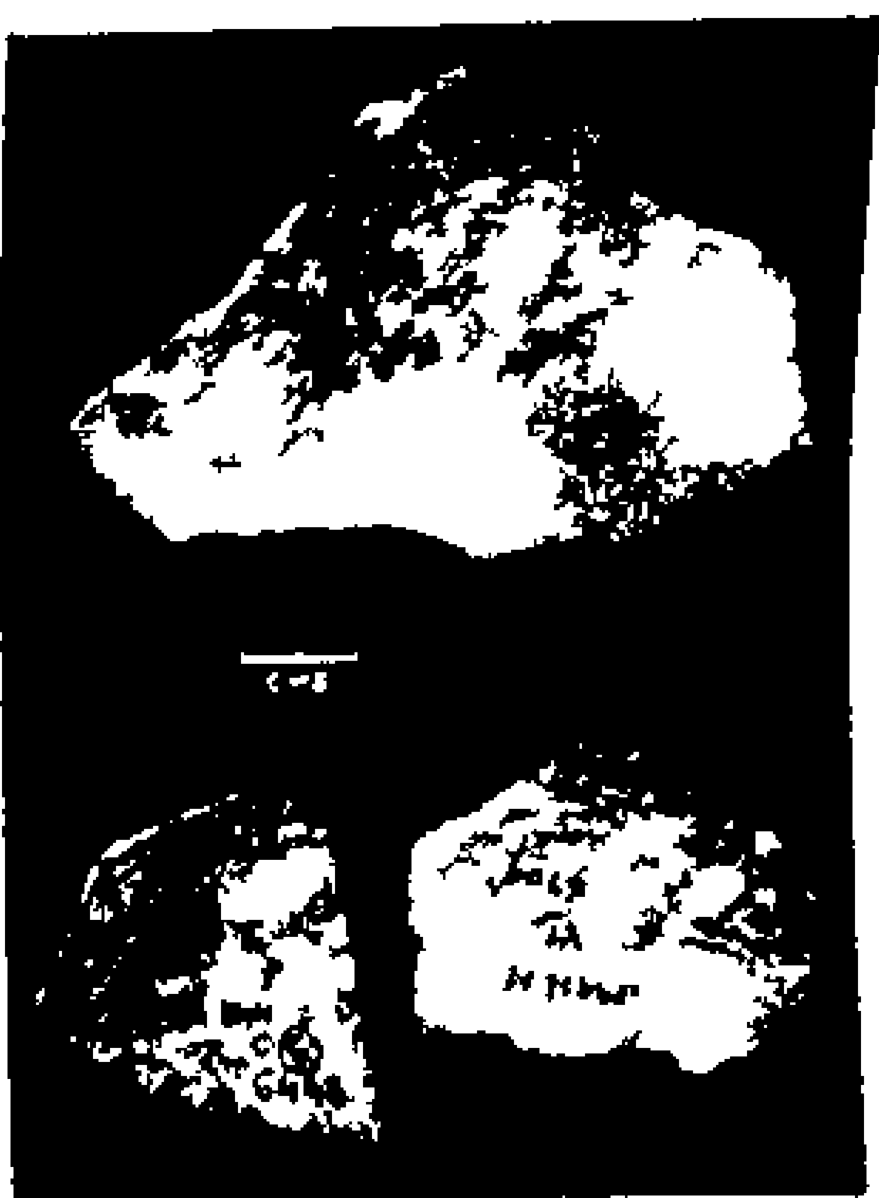
5n Fragment of a vessel with externally beaded rim The beading is faceted Yellow ochre ware No 6461, MG N C(6)

5o Fragment of a vessel with slightly incurved top, yellow ochre ware No 6282 MG N B(6)

PERIOD II

Northern Black Polished (N B P) ware

In all 34 sherds were found, of which 28 come from the main trench (MG N) Their distribution is shown elsewhere This reveals that 23 sherds belong to layers (4) and (5), that is, they can be assigned to Period II



1



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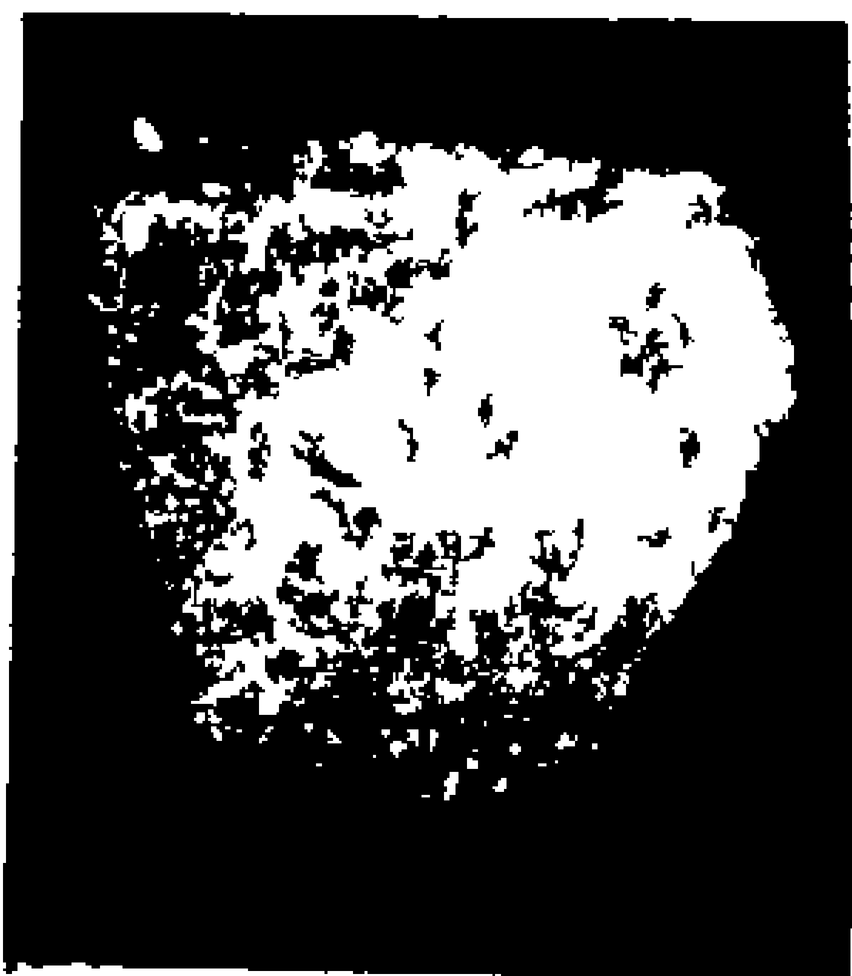
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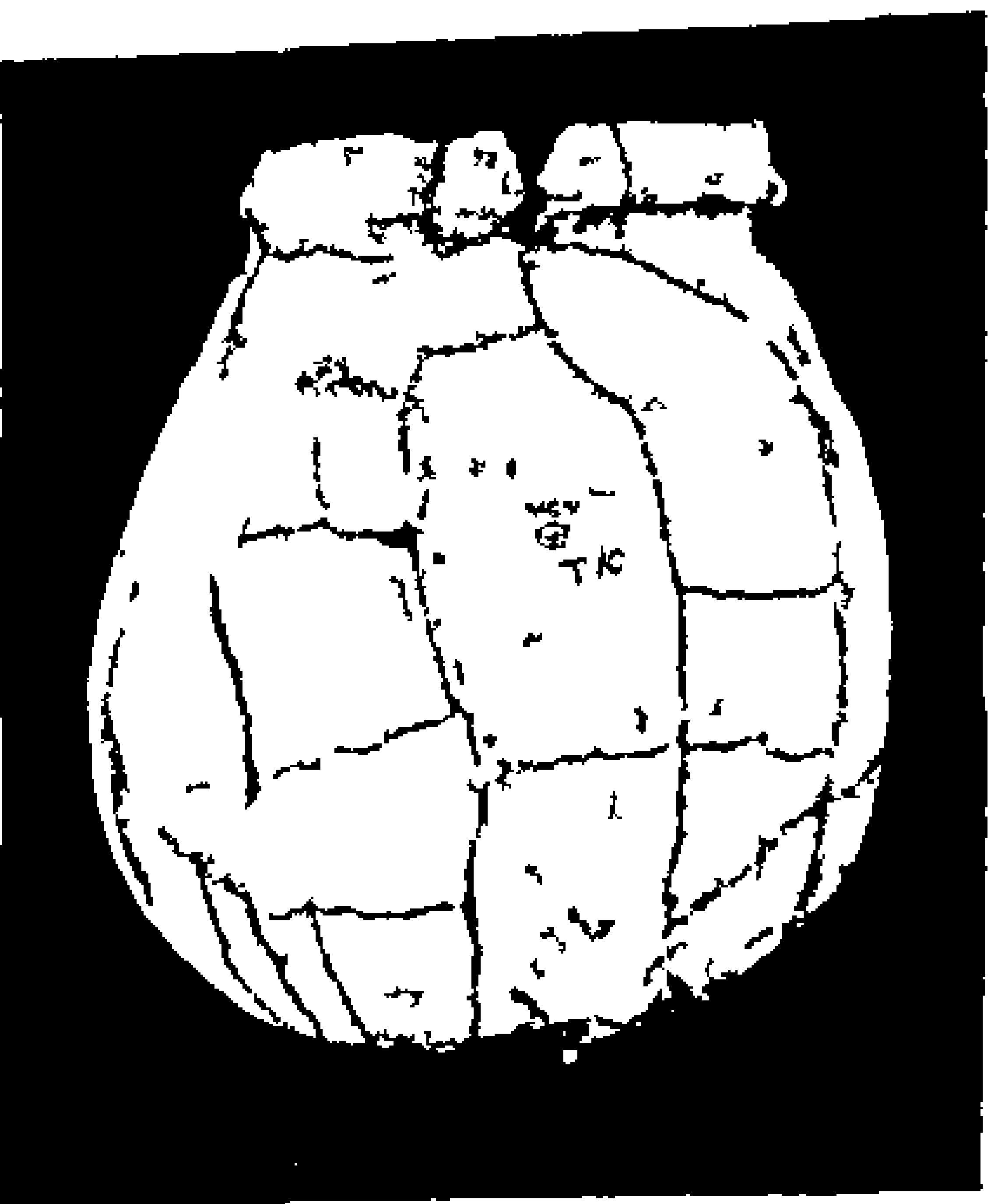
Polshe ds (19) Pe od 1 (*See pp* 43 44)

PLATE XI



1

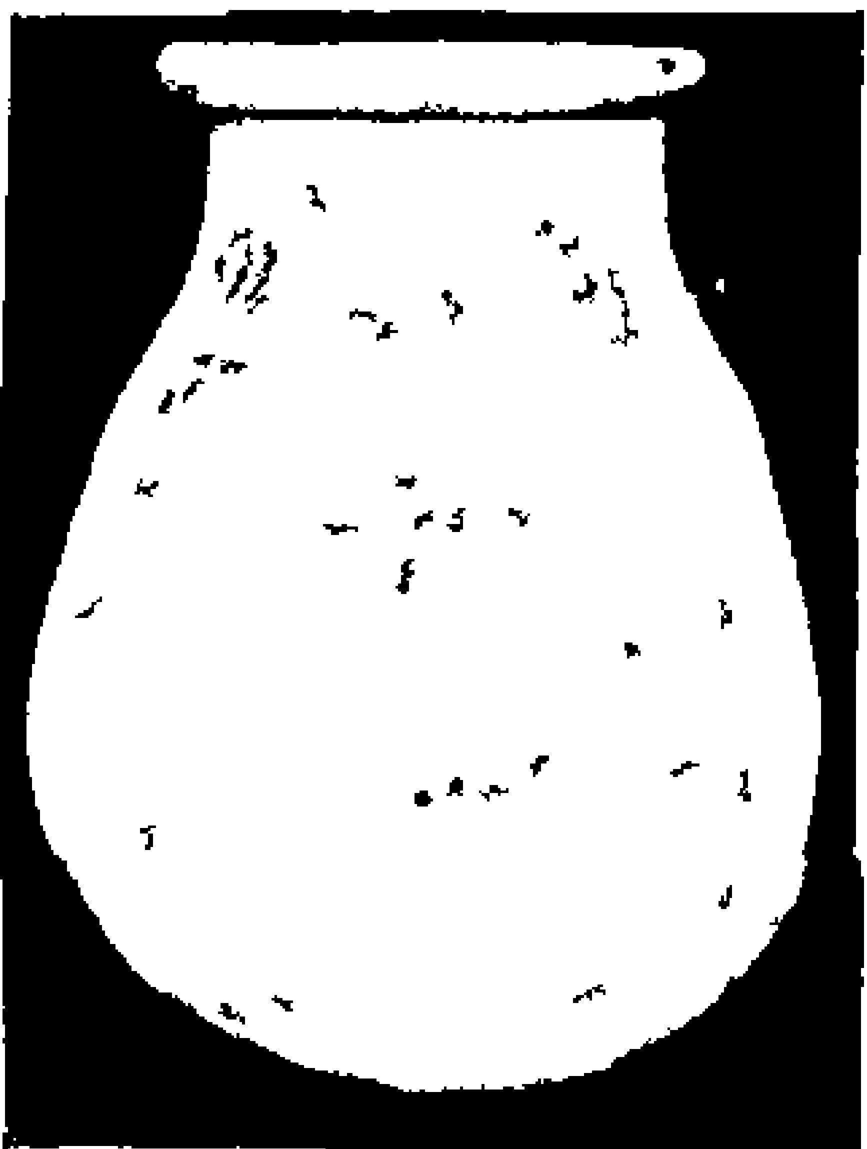




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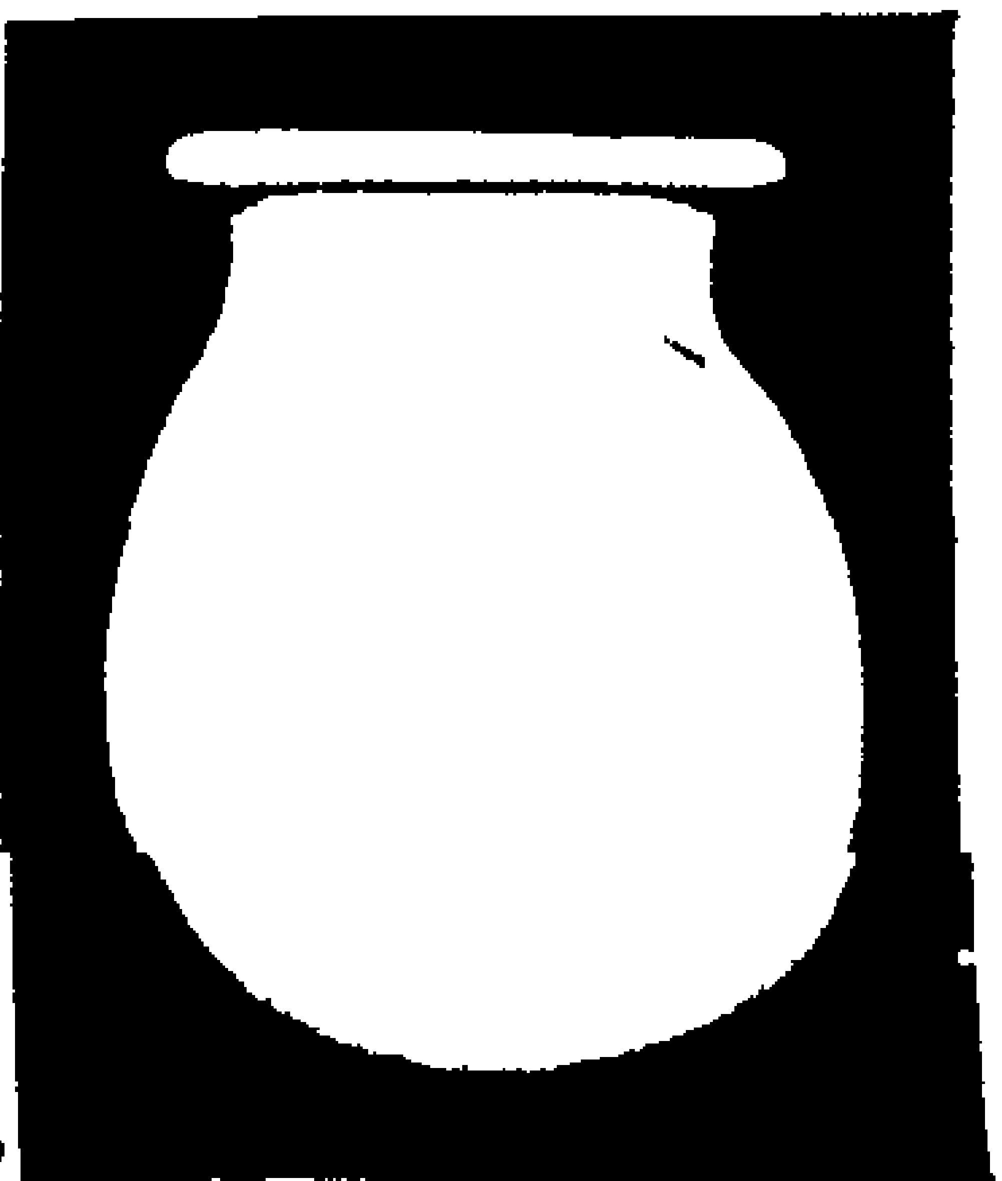
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6

Pottery (Type 1) Period II (See p. 52)

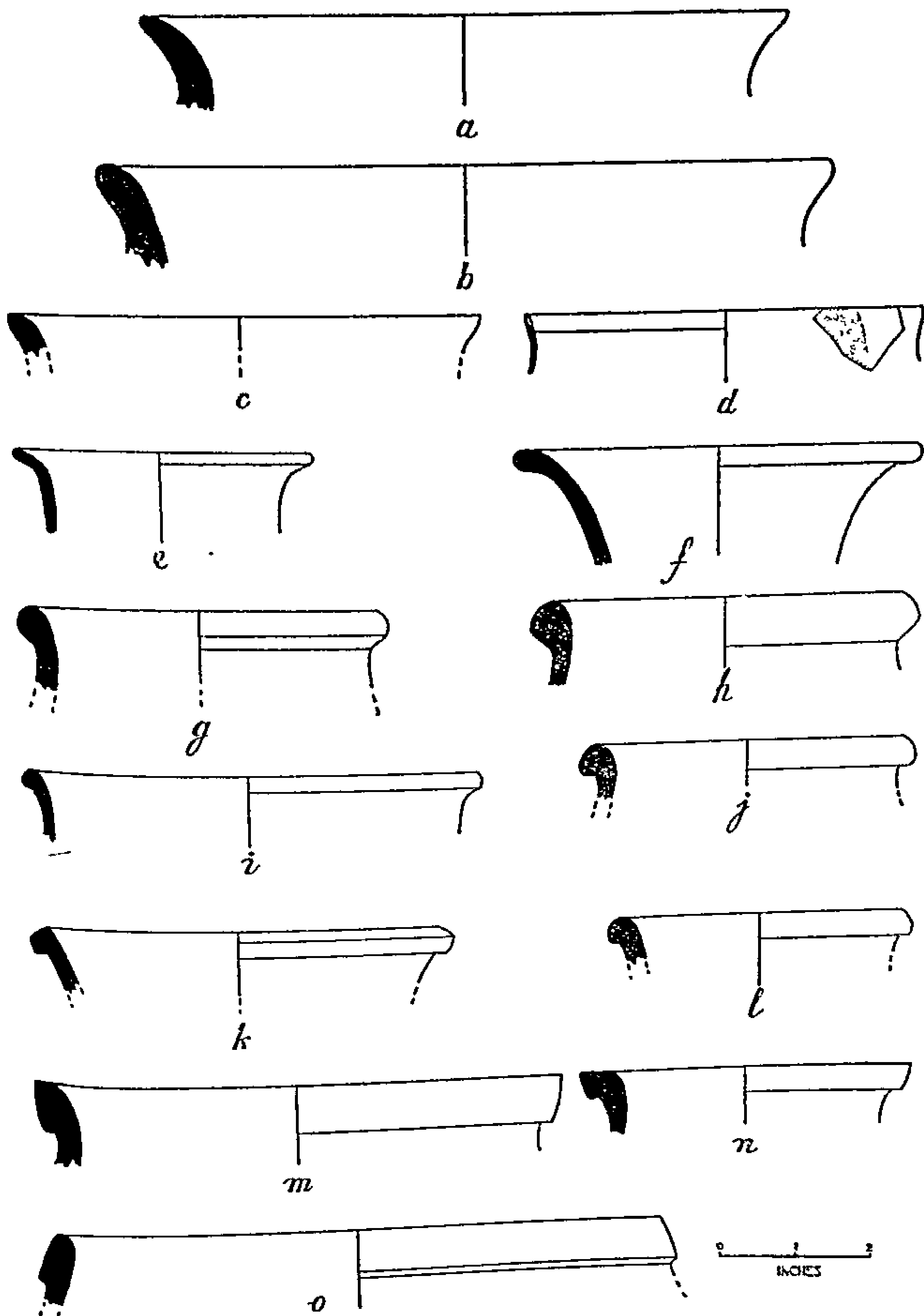


Fig 5, Pottery Types, Rims of medium and broad mouthed vessels, Layer 6, Nasik, Period I

(See p. 40)

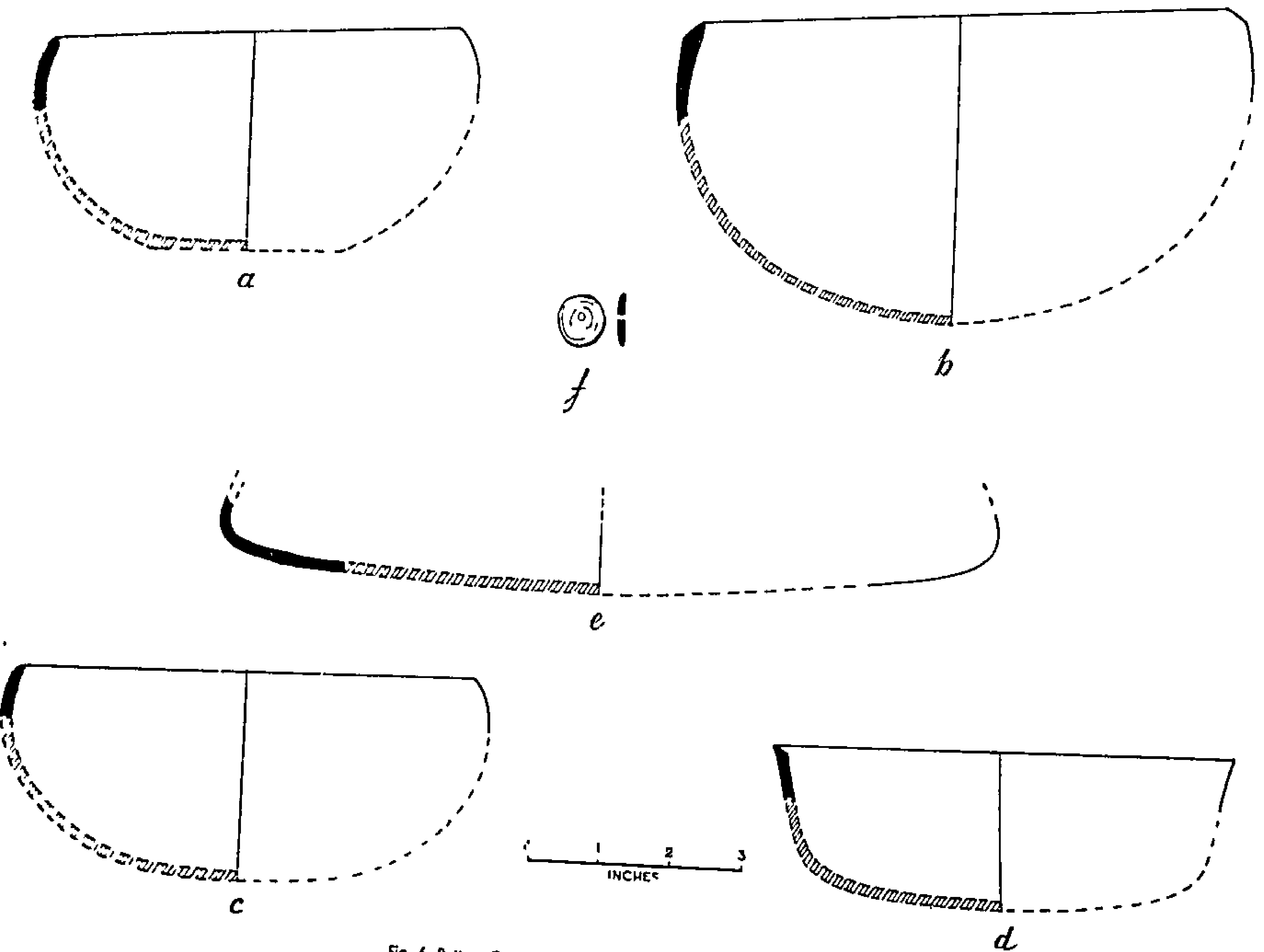


Fig 6 Pottery Types, NBP, Layers 5 and 4, Nasik, Period II
(See p. 47)

At Nasik two colour varieties are available. A large majority are of the lustrous black variety; in the second the surfaces are shining ashy or silvery, one sherd having a pinkish shade as well. The core is dusty white, whereas the inner—original—surfaces are mostly reddish-grey. The sherds seem to represent at least three types of fabrics : viz. (1) thick or very thick fabric (7 mm.), (2) thick to medium (5 mm. to 4 mm.), and (3) thin, and very thin (3 mm. to 2 mm).

Though no complete shapes can be reconstructed, four to five definitely distinct types occur. At the time of writing, not many shapes are known, and the evidence from Kosāmbi and Hastināpur is not available. However, comparing with the published material, it appears that four out of the five types from Nasik are new.

Fig 6, a f

6a Fragment, bowl with flat base and bulging sides No 615, MG N D(5) [Cf *Anc Ind* I, Fig 10, IX]

6b Fragment, bowl, almost semi circular, incurved, faceted edge No 379, MG N E(2) (Mixed stratum) *This seems to be a new type* [Cf *Anc Ind*, I, Fig 10]

6c Fragment, bowl, inturned sides, which slightly bulge No 745, MG N E(5) [Cf *Anc Ind*, I, Fig 10]

6d Fragment, bowl with straight but flaring sides, slightly inwardly faceted, so as to have a thin, sharp edge No 404, MG N B(4)

6e Fragment, dish having sides sharply inturned from the base No 745a, MG N E(5) *Probably a new type*

6f Round sherd, with a bored central hole, perhaps a toy or a spindle, 3 mm thick, No 521a, MG N E(5) From the western well

STRATIGRAPHICAL DISTRIBUTION OF THE NORTHERN BLACK POLISHED (N B P) WARE AT NASIK

Serial No. 1	Sherd No 2	Site 3	Locus 4	Layer 5	Depth 6	Description 7	Figure 8
1	19	Nasik	MG N 1	(2)	3 ft	Light greyish black surface with a reddish streak on the outer surface (4 mm) thick	
2	379	,,	E	(3)	5 ft 5 in	Fragment of rim, angularly inturned, with sharpened edge, colour as in 19, surfaces battered, showing the inner reddish background (6 1/2mm)	Fig 6b
3	491	,,	D	(3)	9 ft 1 in	Fragment, shining ashy colour Thumb impression on the outer broken surface (7 mm)	
4	404	,,	B	(4)	8 ft 2 in	Fragment rim portion, colour as in 19 (4 mm)	Fig 6d
5	738	,,	D	(4)	9 ft 9 in	Sherd similar in colour as 491. (3 mm)	
6	200	,,	F	(4)	10 ft 3 in	Tiny fragment, shining pinkish ashy surface on both sides (4 mm)	
7	490	,,	B	(4)	10 ft 7 in	Tiny fragment, similar in colour to 19 (4 mm)	
8	270	,,	B	(4)	10 ft 7 in	Tiny fragment, thin, similar in colour to 19 (3 mm.)	
9	689	,,	F	(4)	10 ft 9 in	Sherd, thin, colour as in 19 (3 mm)	
10	635	,,	D	(4)	11 ft 5 in	Tiny fragment, shining ashy surface on both sides (5 mm)	
11	790	,,	D	(4)	11 ft 6 in	Tiny fragment, colour as in 19 (3 mm)	
12	271	,,	C	(5)	11 ft 8 in	Tiny fragment, much thinner, less black than 19 (2 mm)	
13	273	,,		(5)	11 ft 8 in	Tiny fragment less black than 19 (3 mm)	
14 17	201 A C four pieces	,,	A	(5)	12 ft 4 in	Four sherds of very thick fabric, with large patches of inner reddish background exposed In one 201 B, the red forms part of the fabric as if by burning The core is dark grey and not whitish grey. (7 mm.)	

Stratigraphical Distribution of the Northern Black Polished (N B P) Ware at Nasik—*Contd*

Serial No.	Sherd No.	Site	Locus	Layer	Depth	Description	Figure
1	2	3	4	5	6	7	8
18	203	Nasik	A	(?)	12 ft. 4 in	Fragment, lustrous black surfaces, thin (3 mm)	
19	418		B	(5)	12 ft 6 in.	Tiny fragment, shining ashy surfaces (4 mm)	
20	693		D	—	12 ft. 9 in.	Tiny fragment shining black surfaces (4 mm)	
21	745	,,	F	(5)	12 ft 9 in	Portion of rim, lustrous black surface, with convex outer and concave inner surface (4 mm)	Fig 6c
22	745a	,,		(5)		Fragment of a dish, black surfaces, which have lost their lustre, showing inner red background (5 mm)	Fig 6o
23	273	,,	A	(5)	13 ft. 4 in.	Fragment of rim of bowl or dish Broken surface at rim, top shows the inner red background, thick fabric (5 mm)	
24 25	277 277a		A	(5)	13 ft 4 in	Two tiny sherds, with greyish red core and black surface, broken (2 and 3 mm respectively)	
26	202		A	(5)	13 ft 4 in	The sherd has completely lost the black polished surface on one side (5 mm)	
27	274		A	(5)	14 ft.	Fragment, black polish flaked off on both sides (5 mm)	
28	721		B	(5)	16 ft	Tiny sherd, black surfaces, very thick fabric (7 mm)	

Thus	One	N B P sherd came from layer	2
	Four	sherds	3
	Ten	,,	4
	Thirteen		5
	Total 28		

N B P. SHERDS FROM OTHER EXCAVATED AREAS AT NASIK.

Serial No. 1	Sherd No. 2	Site 3	Locus 4	Depth 5	Depth 6	Description 7	Plate 8
1	656	Nasik	MG S N	(1)	3 ft. 10 in.	Sherd, with greyish colour, black greyish-white core. (3 mm).	
2	657	,,		(2)	4 ft.	Sherd, colour as in preceding. Light greyish white core. (5 mm)	
3	736	,,	MG.E N.	(1)	3 ft 6 in. (top of stone pavement)	Sherd of a dish, with flat rim, black surface inside only, reddish grey outside. (5 mm).	
4	769	,,	,,	(2)	5 ft. 4 in.	Sherd, much abraded, the inner colour is also worn out, reddish core. (4 mm).	
5	854	,,	,, Ic	(2)	8 ft. 4 in.	Small thin sherd, dirty white core. (2 mm.).	
6	888	,,	,, Ic	(3)		Sherd, worn out with grooves and scratches on the inner surface, dirty white core. (5 mm.).	

Period II

According to the colour of the ware, the pottery from layer 5 may be classified into the following four classes —

I Red ware
II Black and-Red ware
III Light Tan and Black ware
IV Ordinary Black ware

This is also the order if the quantity of each ware is taken into account In the number of types as well as in the quality of the sherds recovered, the Red predominates Of the Tan ware, on the other hand, there are very few sherds and types

From the point of view of quality, however, the order may be reversed The Tan ware has generally a thinner body, is light in weight and smooth in touch with a burnished and at times polished surface

The Black and-Red ware has some types which are thinner and finer than the Tan ware But it also includes thicker and often coarser Black ware types This ware seems to be connected typologically and in technique, though not in finish, with the Black or Black-and Red Megalithic ware

The Red ware is on the whole inferior to the above two, include as it does types of vessels such as the storage jars (*ranjan*), water-vessel (*matakā*), cooking vessel (*handi*) all for ordinary daily use But there are exceptions Vessels with thin walls and fine polished red surfaces also exist The Red ware may be provisionally regarded as the local Nasik Pottery In fabric it is totally different from the earliest Nasik ware Similarities in types, however, between the earliest and the Black and Red, (particularly in the rimless bowl, and the dish with low incurved wall) may be discerned

Red Ware

The Red ware consists primarily of vessels of ordinary, utilitarian use Excepting, therefore, one or two types, the ware includes vessels having medium to thick walls, the surfaces of which are rarely, if at all, covered with any slip or wash, and polished The natural surface is at times burnished, otherwise it is rough The clay is generally gritty, coarse, and contains some amount of lime, sand and husk Barring exceptions, it is usually wheel made The following are some of the most common shapes —

(1) Gourd-shaped vessels, (2) Globular vessels with rounded base and narrow neck (*Ghata*), (3) Broad-mouthed vessels with flat base, (4) Dishes or Lids (*Thālī* or *Dhānkan*), (5) Small water vessels (*Lotā*), (6) Bowls (*Vāṭī*) and (7) Large Storage Jars (*Rānjans*)

Type 1 Gourd-shaped vessels

Two vessels were recovered intact from the ring-well and three were reconstructed from sherds from the same spot Thus there are five vessels Though modelled after a gourd, they slightly differ in shapes from each other, and hence four are described as sub-types Of medium thickness, they have a dull red, coarse surface, because these alone seem to be handmade The upper portions, though not very regular, are turned on a wheel, and later fixed on to the handmade body The following are illustrated —

Fig 7 (1, 1a-1d)

1 Gourd shaped vessel having an elongated bulging body round bottom slightly narrow neck with simple externally beaded rim and an incomplete groove on the inner side The clay is very coarse and contains large grains of lime This is the most perfect of the group No 5729 MG N E(5) From the well [See also pl XI 4]

1a Gourd shaped vessel smaller than No 5729 (T 1) having a more shapely body slightly angular shoulder, and beaded rim Lighter in colour No 5727 MG N E (5) From the well [See also pl XI, 6]

1b Gourd shaped vessel with an elongated body very irregular in outline with blotchy surface The beaded rim is deeply cut No 5728 MG N E(5) From the well

1c Gourd shaped vessel with elongated body Whether because it was pressed or what soon after it was made it has a pronounced irregular outline It has no rim but there is a collar like projecting band near the top No 352 MG N A(5) [See also pl XI, 3]

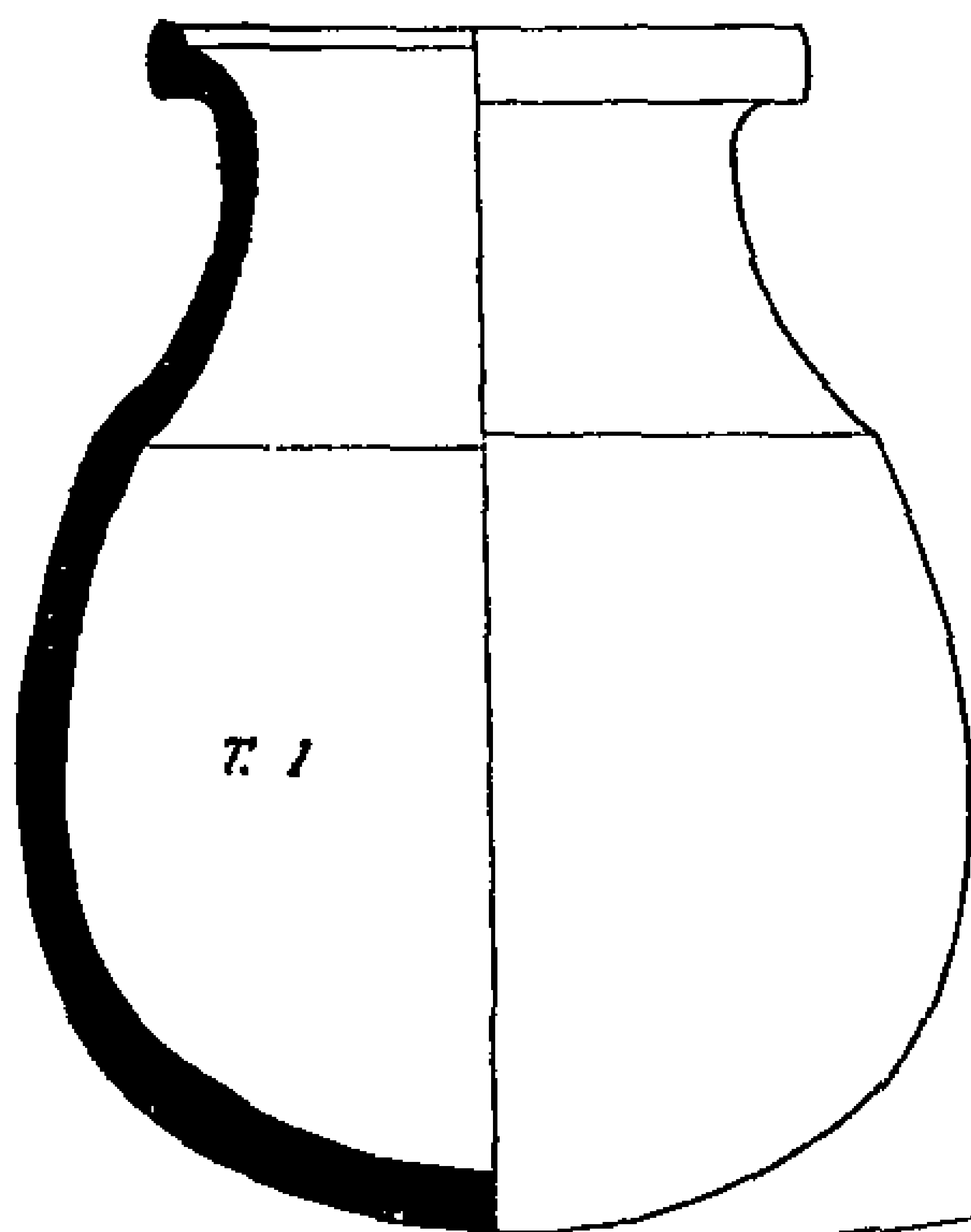
Do MG N (4) [pl XI, 2]

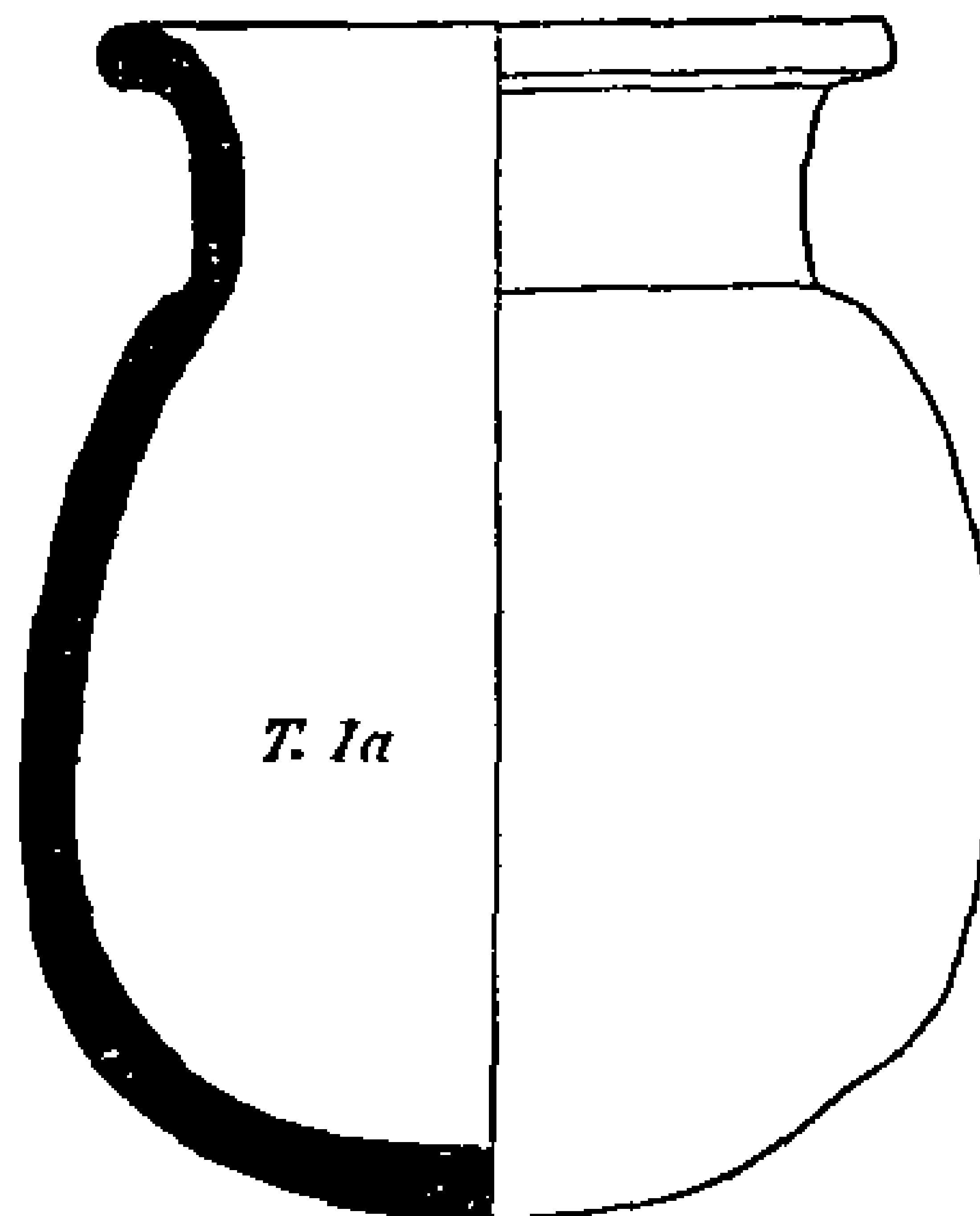
1d Gourd shaped vessel with a very much elongated body, round bottom and externally beaded rim No 5728a MG N E(5) Fragments (Nos 6436 6497, 6449 6455, 6494) [See also pl XI, 5]

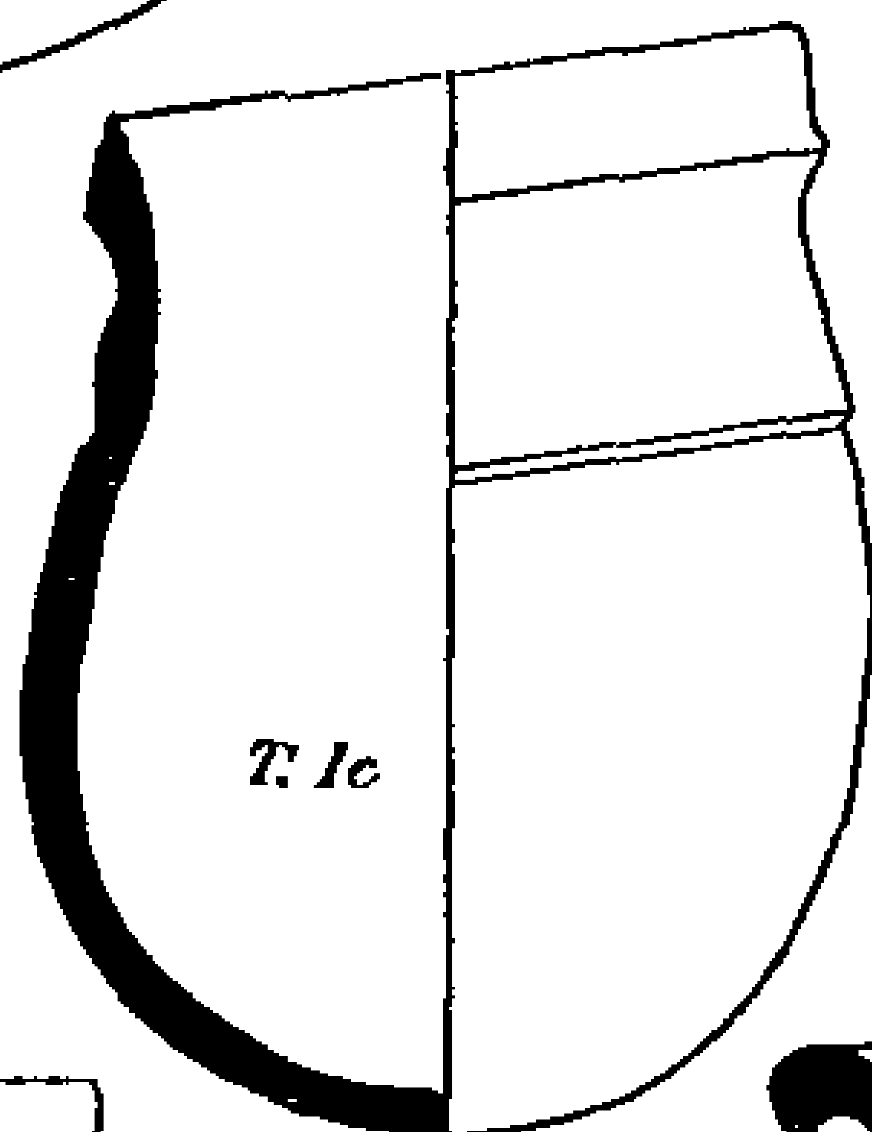
Fig 8 (2, 2a g)

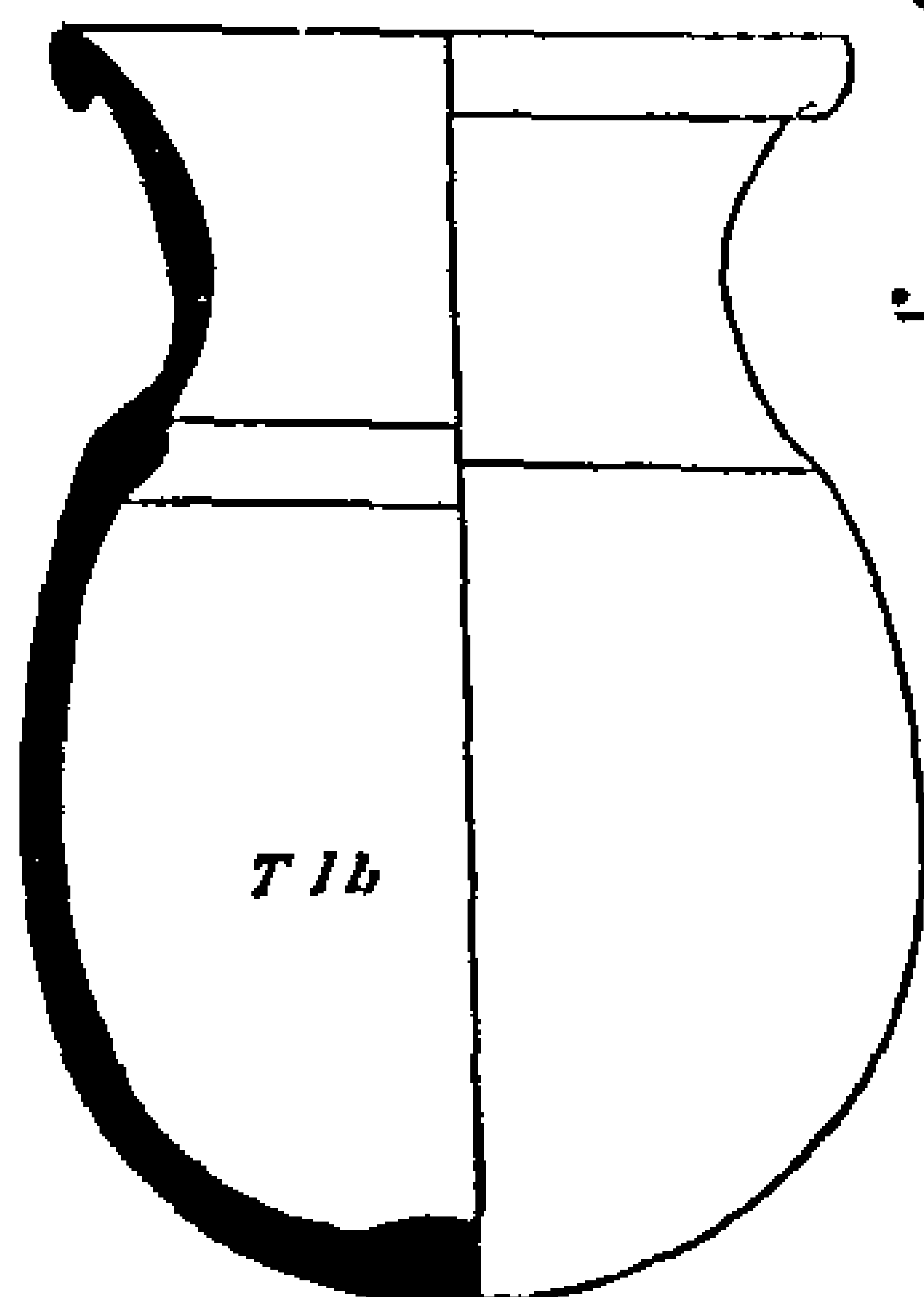
Type 2 Globular vessels

Of this type mostly sherds have been found Excepting a fine red vessel, not enough sherds were recovered to determine the exact shape in all cases But the size—thickness and diameter—of the rims gives some idea of the vessels they represent The rims, however, are varied in shapes These thus form the sub-types











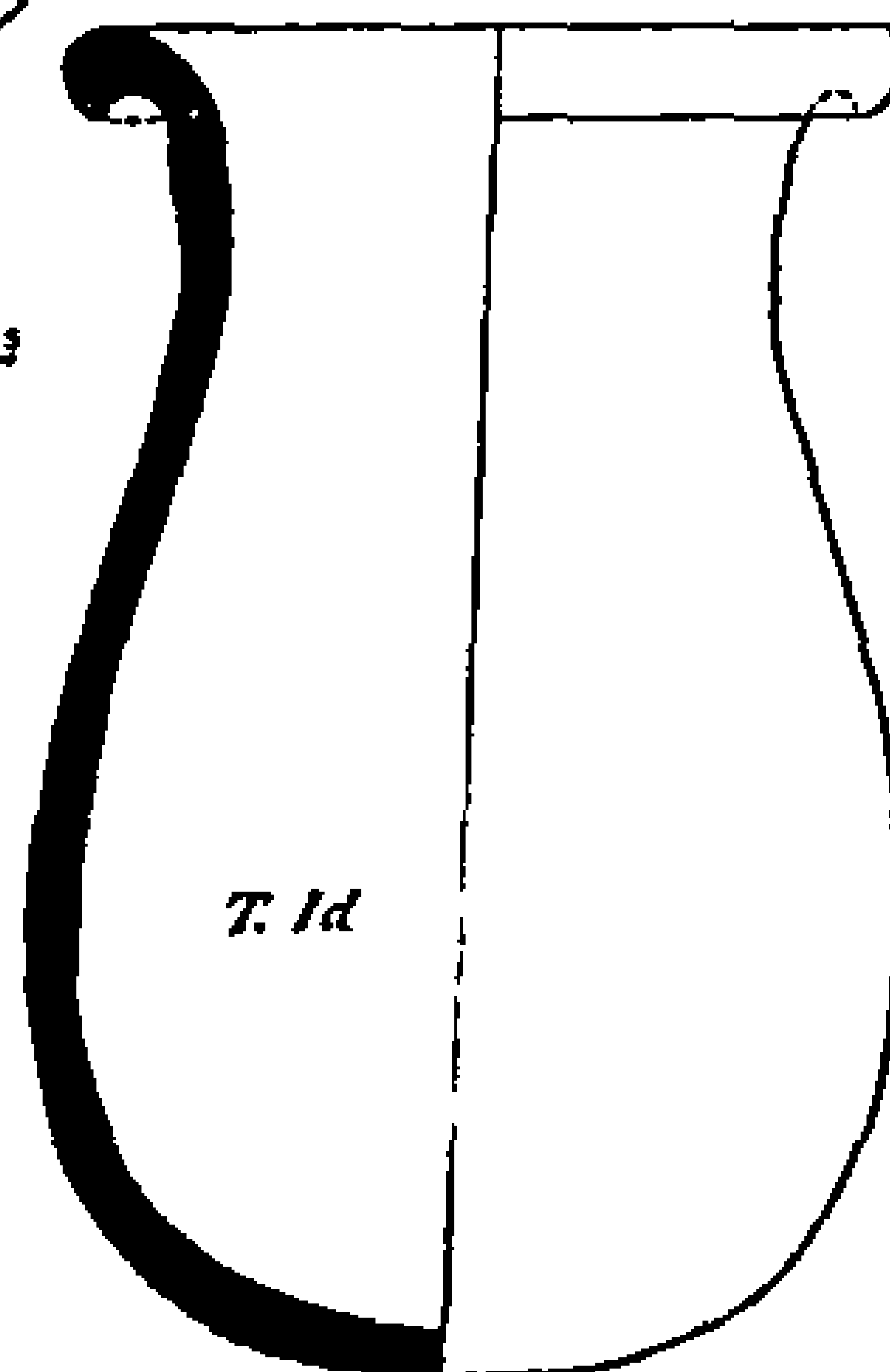


Fig 7 Type I Red Ware (Gourd-shaped Vessels) Layer 5 Nasik Period II (A)

(See p. 52)

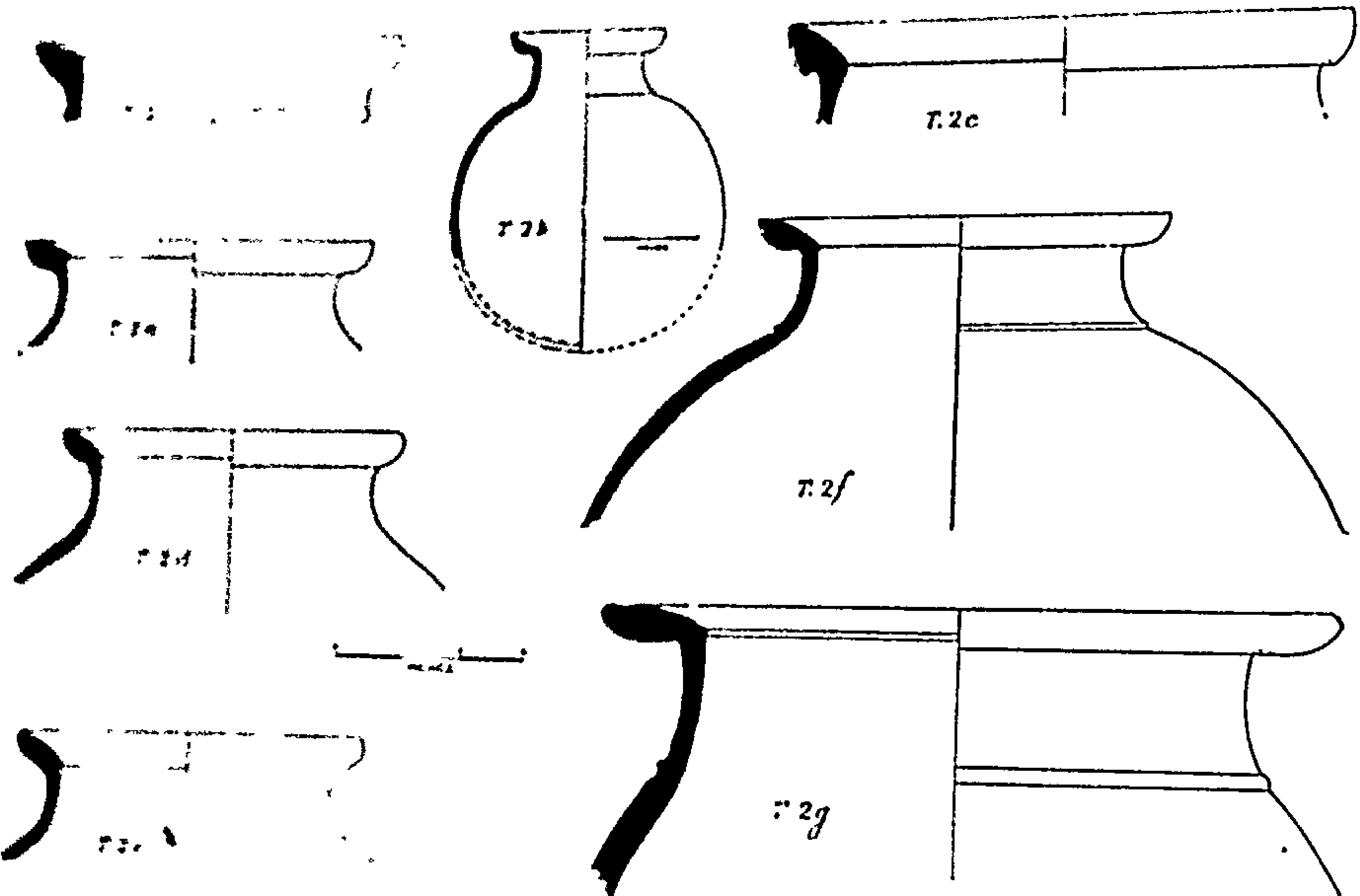
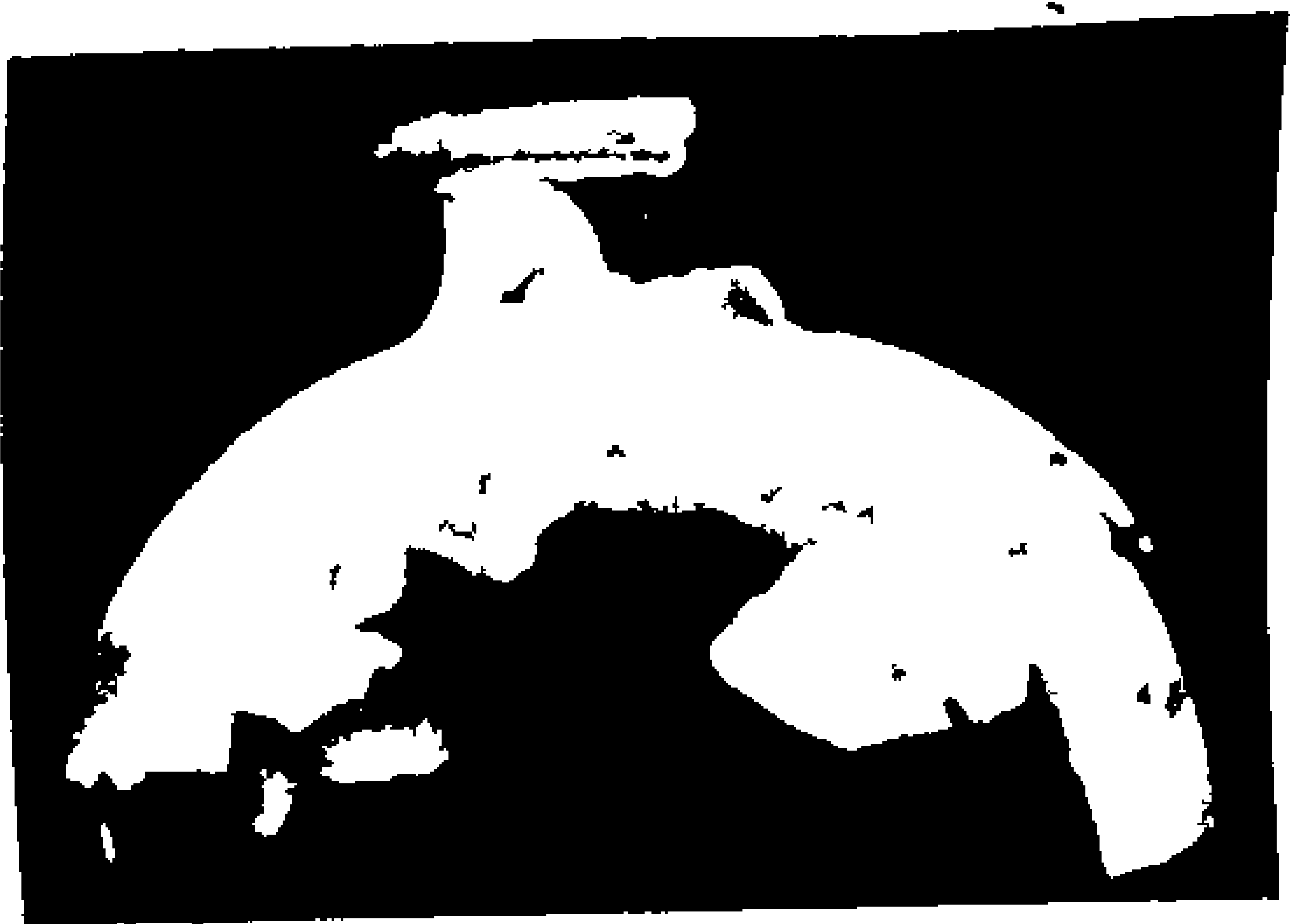


Fig. 8 Type 2 Red Ware, (Globular Vessels?), Layer 5, Mask, Period II (A)
(See pp. 22 [illegible])



1



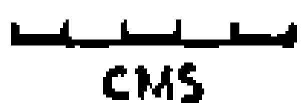
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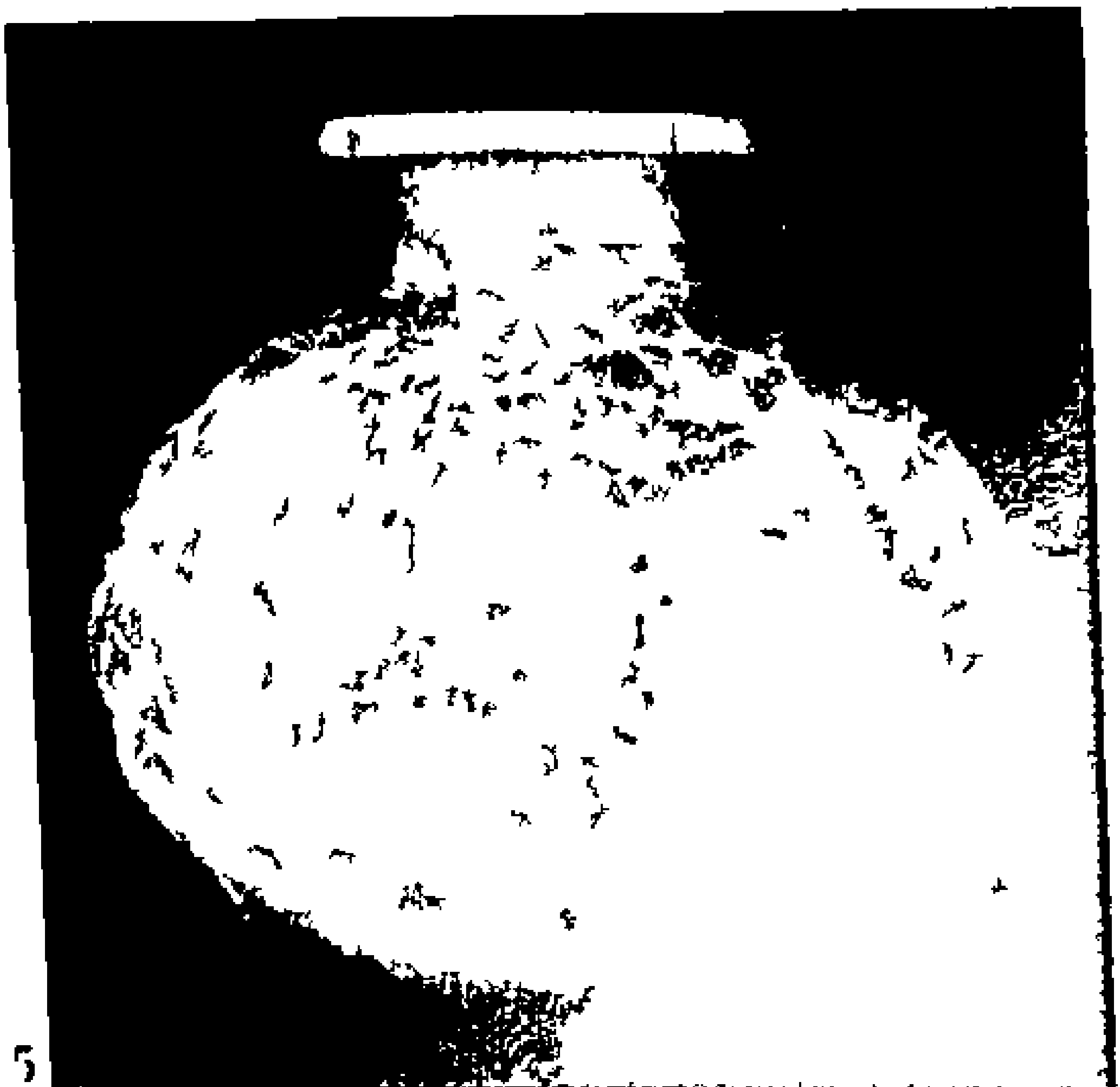


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5

Pottery (Types 2 5 9) Per od II
(See *pp* 53 51)

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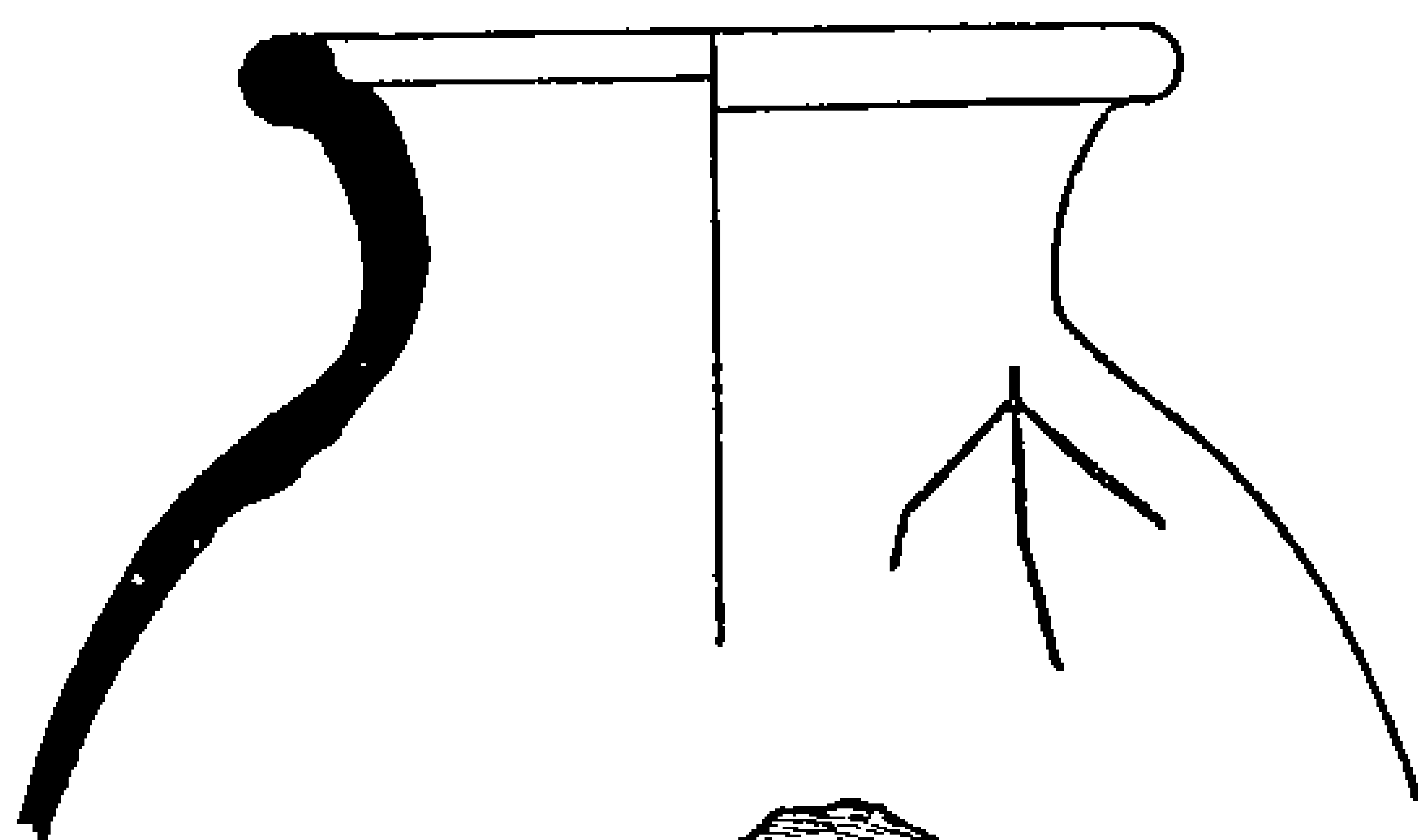
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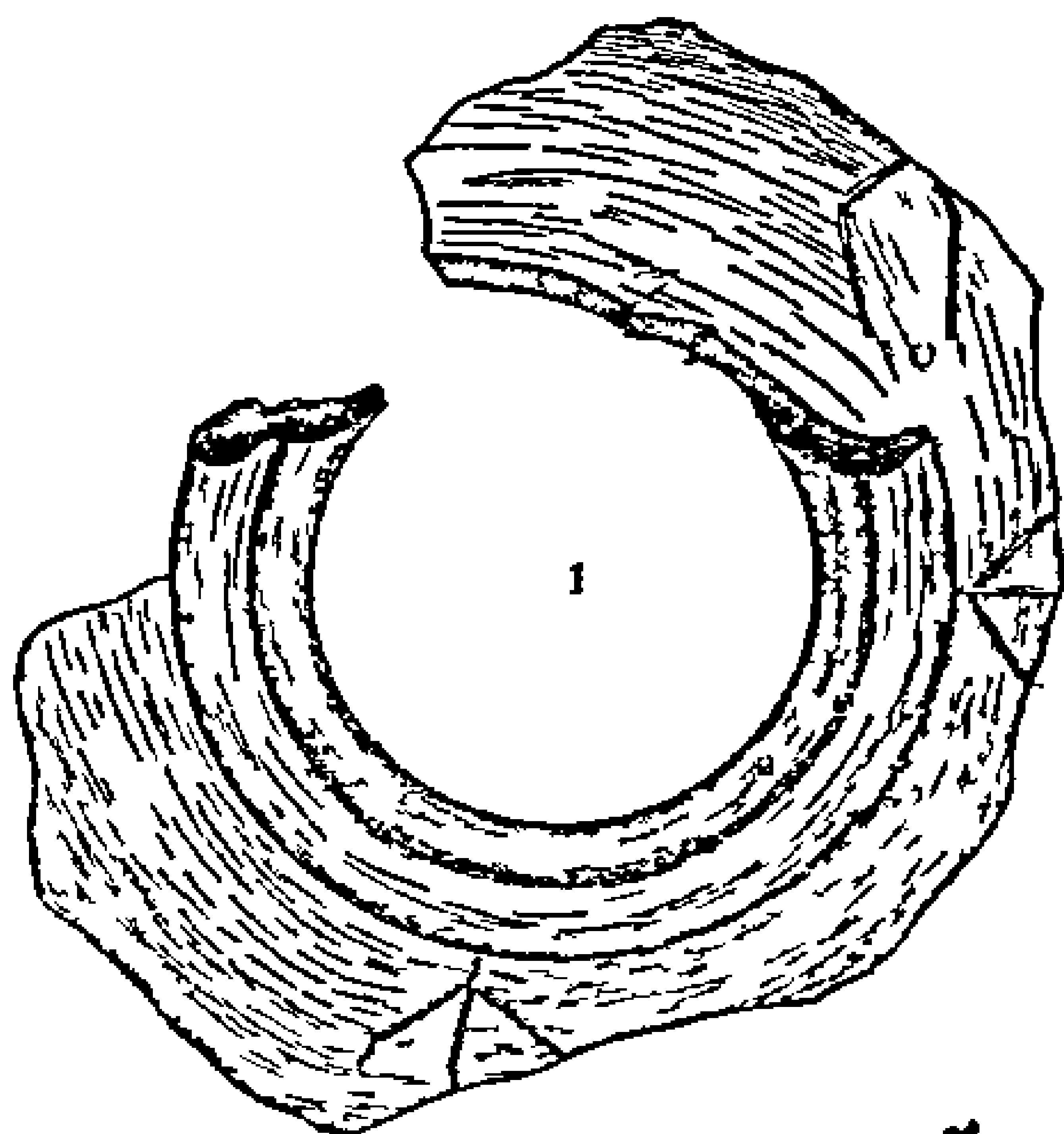
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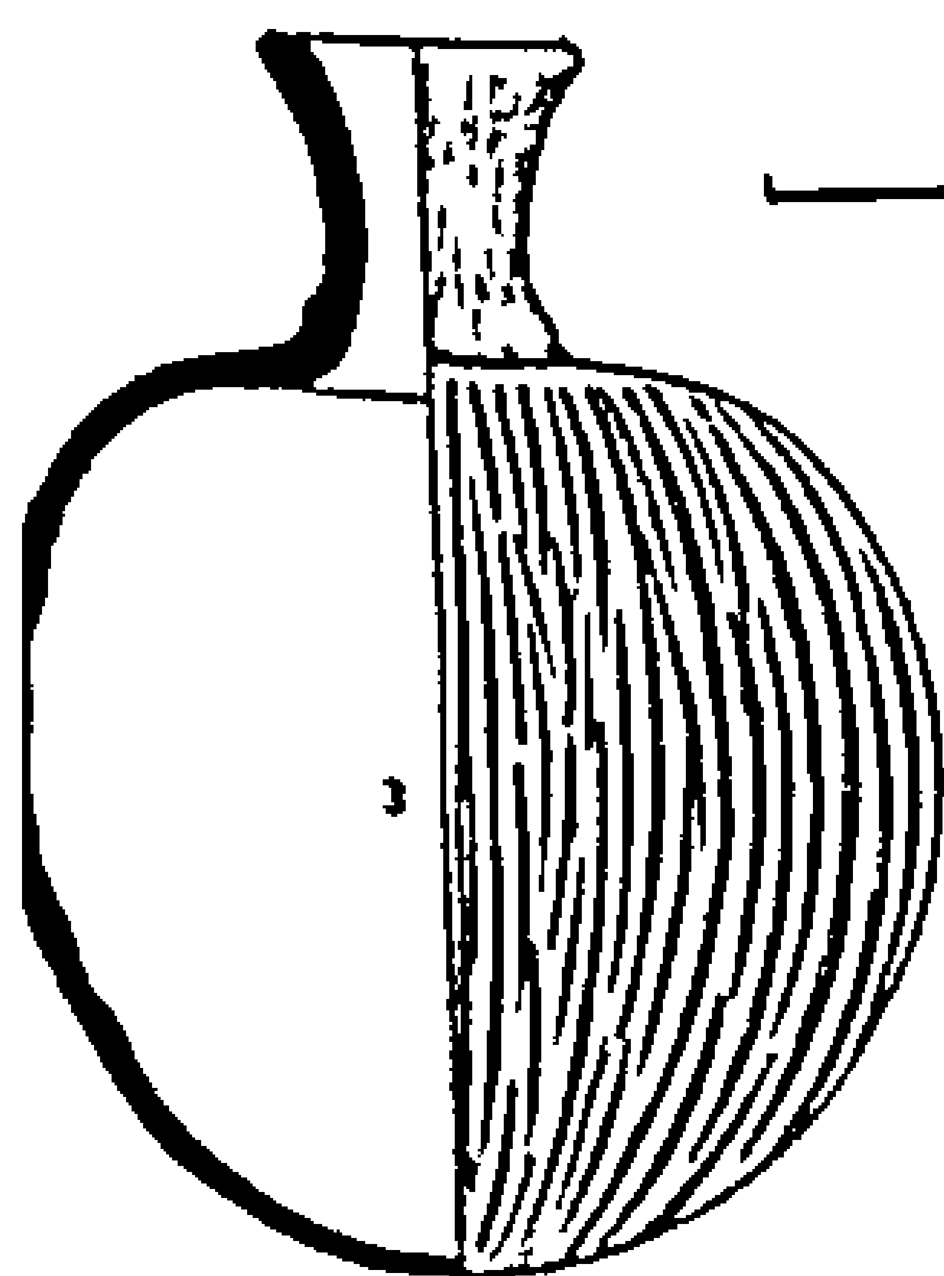
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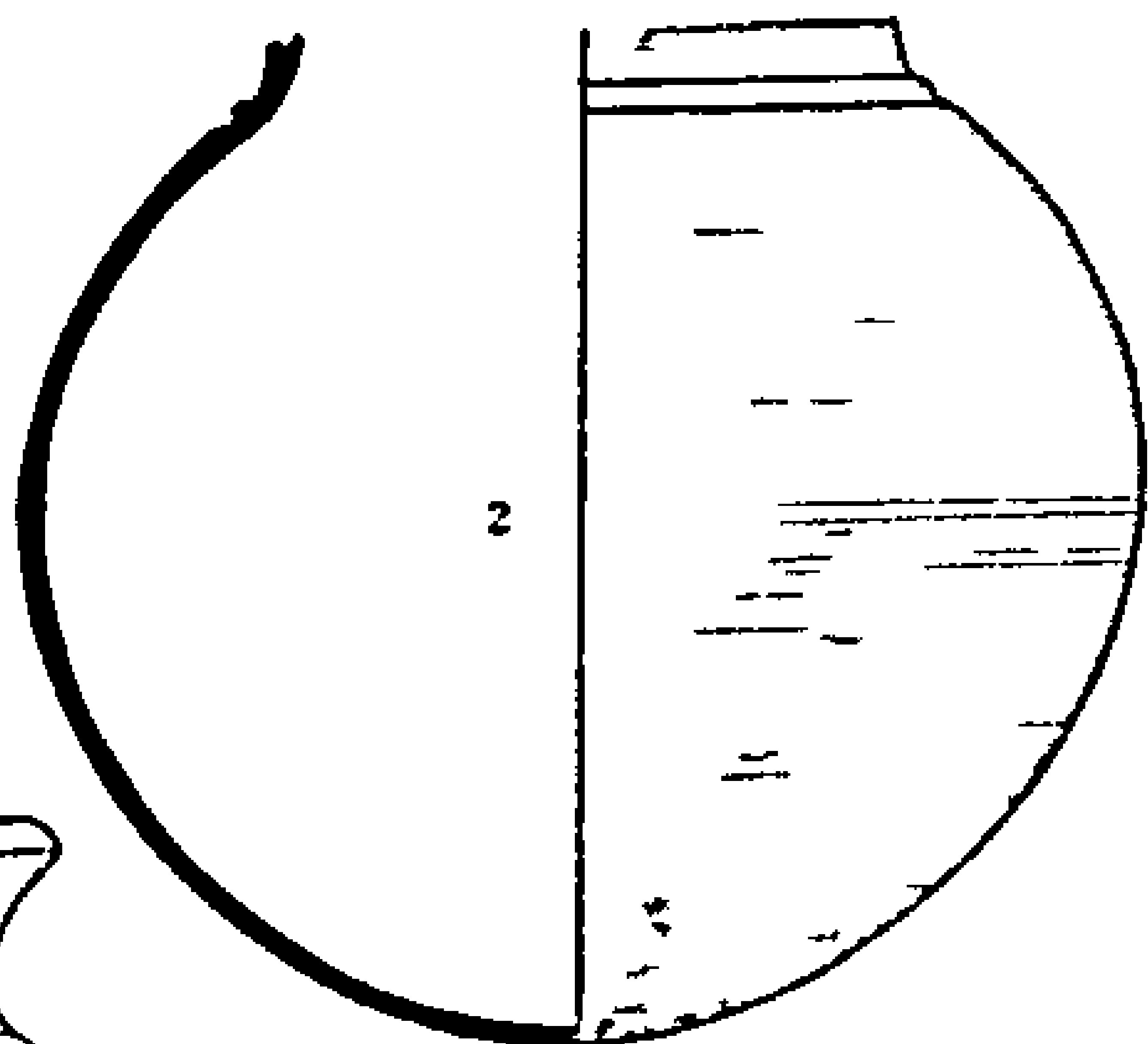
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Pottery (Types 16, 18a, 126, 26, 41') Period II (*See pp. 57, 58, 60, 65, 68*)









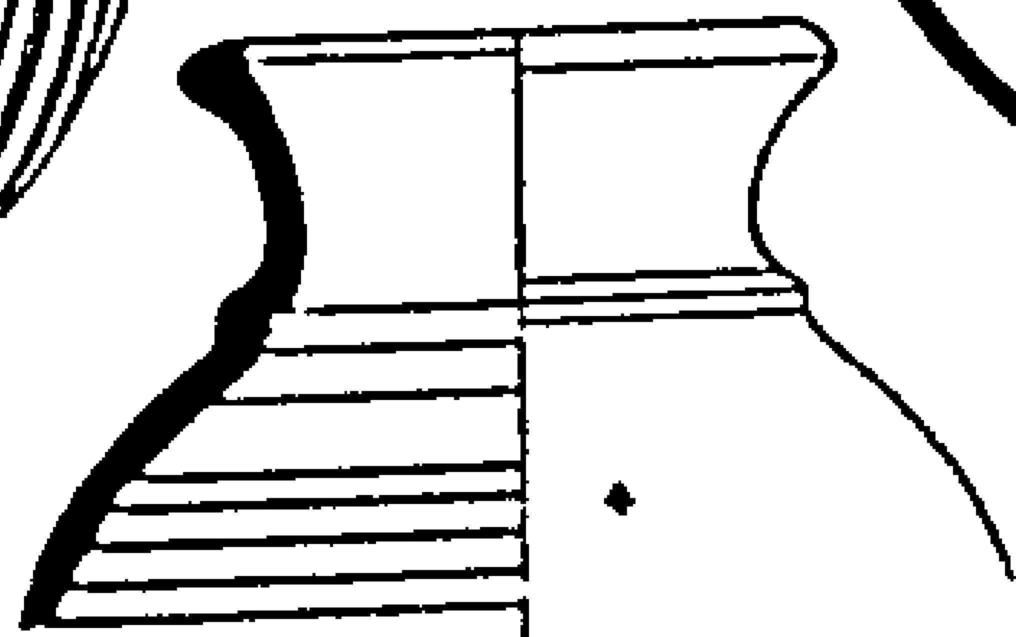


Fig. 8a Red Ware (specialised ware)
(See p. [illegible])

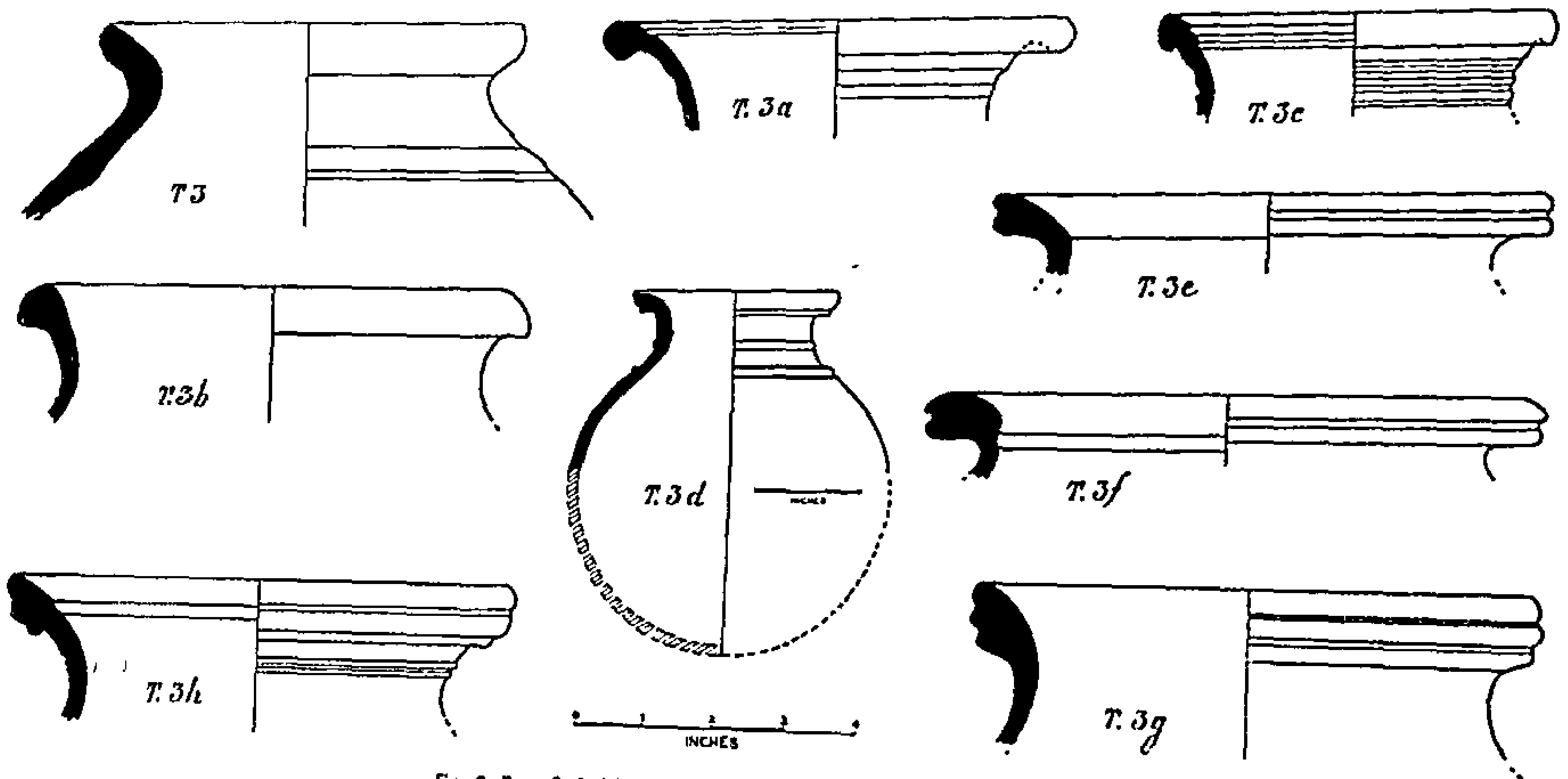


Fig. 9 Type 3 Red Ware (Globular Vessels?) Layer 5, Period II (A)
(See p. 53)

2 Fragment, rim broad at the top and then gently sloping inwards with a thin groove, and a raised band round the neck No slip or wash, but burnished smooth over the red surface No 6071, MG N A(5)

2a. Fragment, rim, almost similar to above, but of coarser fabric, and without burnishing and decoration No 6076, MG N A(5)

2b Complete upper half of a pale salmon coloured globular vessel with a cut rim, and thin groove round the shoulder Coarse surface, without slip or wash The inner side below the neck has a very uneven blackish surface No 5205, MG N E(5) From the well. [pl XII, 4]

2c Fragment, rim, similar to above, with the cut below the rim base more marked Fine bright red slip over a coarse surface No 6131, MG N A(5)

2d Fragment, rim, similar to above but without a cut at the base of the rim No slip and coarse exterior No 6494, MG.N E(5) From the well

2e Fragment, similar to No 6495, but with four grooves round the neck Smooth dark brown exterior No 6482, MG N E(5) From the well

2f Fragment, rim having a flatter top, and three narrow grooves on the shoulder No 6504, MG N E(5) From the well

2g Fragment, rim, of a large vessel The rim is very broad and flat, with a shallow groove at the edge and raised band round the shoulder The top of the rim as well as the exterior is beautifully burnished to give it a smooth, shining appearance No 6433, MG.N E(5) From the well

Fig. 9. (3, 3a-3h)

Type 3 Globular vessels

3 Fragment, rim of a short, narrow necked vessel The rim is almost identical with that of T.2, but slightly thicker and rounded This becomes more pronounced in its sub-types Hence it is distinguished from T 2 The vessel had no slip or wash and was moderately burnished No 6069, MG N A(5)

3a. Complete top of rim, with a shallow cut at its base and thin grooves round the neck Traces of red wash over an otherwise coarse light red surface No 5203, MG.N (5)

3b Fragment, rim, externally beaded, coarse, dirty red surface No 6075, MG N A(5)

3c Fragment, rim externally beaded and cut, with grooves round the neck inside and outside Dull red, well burnished surfaces. No 6082, MG.N A(5)

3d Complete upper half of a dark red globular vessel with blackened middle part It has a slightly flaring cut rim with a groove at its base and a shallow raised band on the shoulder and neck lightly burnished No 5204, MG.N E(5) [pl XII, 2 for a large variety pl. XII, 1]

3e Fragment, rim with a groove around cutting it into two The vessel had a bright red slip and smooth burnished surfaces. No 6079, MG N A(5)

3f Fragment, rim, similar to T 3e, but with the cut around the rim deeper Fabric also similar No 6120, MG.N A(5)

3g Fragment, rim with two deep grooves round the rim Coarse red fabric, moderately burnished, but without a slip No 2700, MG.N G(5)

3h Fragment rim with two grooves round the rim and a deep cut at its base, and shallow bands round the neck Dark crimson red, coarse fabric, burnished but without a slip. No 2701, MG.N G(5)

Fig 10 (4, 4a 4g)

Type 4

In this type the rim is internally slightly concave and convex outside and gradually develops a drip or a cut at its base It resembles the cymarecta, an inverted moulding of the base of a temple or its pillar

4 Fragment rim externally beaded and cut with a slightly raised band round the neck dull red coarse fabric without slip No 6133 MG N A(5)

4a Fragment rim externally beaded with a raised band round the narrow neck Internally the rim is not concave but flares out Bright red fine fabric with a uniform slip and well burnished into a smooth surface No 6133a MG N C(5)

4b Fragment rim of a slightly larger vessel Fabric etc as in No 6133 MG N A(5)

4c Fragment rim with an internal groove and a raised band round the neck Internally the rim is not concave but tends to flare out Dull red fabric with traces of red slip No 6091 MG N A(5)

4d Fragment rim decorated with two grooves around the rim with notches in between and then with a groove inside and vertical notches on the neck Red slip burnished smooth The notches were made after both these processes were gone through No 4294 MG N G(5)

4e Fragment rim with a slightly concave neck and thinner flaring rim Red slip over a coarse fabric and then burnished smooth No 6078 MG.N A(5)

4f Fragment rim externally beaded with a groove inside and deep cut at base outside Red slip and smooth burnished surface No 6088 MG N A(5)

4g Fragment rim with a slight convexity inside and externally having projected pointed beading Red slip and smooth but now cracked burnished surface No 6148 MG N A(5)

Fig 11 (5, 5a 5b)

Type 5

5 Large fragment of rim neck and shoulder of a coarse dirty brown ware Four grooves round the high neck Moderately burnished No 6498 MG N E(5) From the well

5a Fragment rim and neck of a large vessel The neck is narrow and rim flaring with externally cut beading a raised band round the neck and two grooves round the shoulder and a shallow groove inside just below the edge of the rim Thick bright red coating over a coarse gritty surface smoothed by burnishing No 6486 MG N E(5) From the well

5b Almost a complete vessel with low small narrow neck and a globular body with rounded base The rim has a groove just below the edge on the inside and an external cut beading The vessel has bright polished red surface and was made out of well levigated clay and had received an uniform red coating It is one of the few finer vessels in Red Ware and is now fully reconstructed No 643? MG N E(5) [See pl XII 5]

Fig 12 (6, 6a 6f)

Type 6

This type includes small vessels, generally of finer fabric The rim is rounded and not exactly beaded as in Type 5

6 Fragment, rim of a small vessel, light red slip, burnished, with smooth surfaces No 6106, MG N A(5)

6a Fragment, flaring rim of a slightly larger vessel than No 6106 Bright red slip but surfaces rather coarse No 4378, MG N B(5)

6b Fragment rim, neck and part of shoulder, blackish red, smooth surfaces, due to burnishing over a slipped surface No 6541, MG N E(5) From the well

6c Fragment, rim and neck with grooves round the lower part of the neck, inside and outside Light red slip, with smooth surface No 5232, MG N D(5)

6d Fragment (in two pieces) rim and neck, the rim has got a pointed beading Fine bright red smooth surface owing to burnishing on red slip The clay is also well levigated No 4336, MG N B(5)

6e Fragment in three pieces of rim and neck The rim is similar to that in No 4336 but has grooves round the neck Light red, moderately smooth surface No 6515, MG N E(5)

6f Fragment, rim of a straight necked vessel, with grooves Rim sharply beaded and cut Blotchy red smooth surface No 6484 MG N E(5) From the well

Fig 13 (7, 7a-7b, 8, 8a 8e)

Type 7 Straight Necked Vessels

Only a very few sherds of this type were found Since the middle or lower parts are not known, it is difficult to say how the complete vessels looked

7 Fragment of a straight necked rimless vessel Bright red slip with smooth surfaces No 4624, MG N F(5)

7a Fragment, almost similar to No 4624 No 4609, MG N D(5)

7b Fragment of a rimless vessel with a neck Light, fine fabric with traces of bright red slip with smooth surfaces No 4605 MG N B(5)

Type 8

In this type the vessels have a globular body but generally a flat base

8 Fragment globular part of body and flat base Shallow corrugation on the inside towards the base end Bright red slip with a burnished smooth surface No 5231 MG N D(5)

8a Fragment similar but coarser fabric without slip Not illustrated No 4547 MG N (5)

8b Complete small vessel having globular body flat base rimless, constricted neck, very coarse a light brown fabric without any slip No 5207 MG N D(5) [pl XIV 6]

8c Fragment globular part only Thin very light, pale brown fabric The thin coating of slip is now disappearing No 4616 MG N D(5)

8d Fragment everted rim and upper half of the body Very coarse light brown fabric smoothed by a slight burnishing No 6465 MG N E(5)

8e Fragment, flat base and part of lower body only Coarse light exterior, but the interior is coated with crimson red slip No 4532 MG N D(5)

Fig 14. (9, 9a-9c)

Type 9

Vessels with short neck, outturned rim, carinated shoulder, and rounded base *Cf* Also similar type in Tan and Ordinary Black ware, Fig 27, Type 40, and Fig 28, Type 43

9 Fragment neck, rim and body A raised band, and two grooves round the narrow neck Outturned rim and well carinated body No 5236, MG.N E(5) From the well [Cf Identical type in Black Ware and Tan Ware No 6450]

9a Fragment rim possibly of this type of vessel Bright red smooth surfaces No 6517, MG N E(5) From the well

9b Fragment rim and carinated body There is no neck and the rim is outturned Shallow grooves round the top of shoulder, well carinated body The vessel has coarse red surface, with slip above the carination, and black below Inside, however, it was uniformly coarse red No 6512, MG N E(5) From the well [See pl XII, 3 for an identical type from layer (4)]

9c Fragment rim, and part of the shoulder Fabric thinner, but coarse with a thin wash No 6765 MG N D(5)

Fig 15 (10, 10a 10c, 11, 11a; 12)

Type 10 Broad Mouthed vessels with Rounded Base

10 Half of a broad mouthed vessel with a little bulging body and rounded base Slightly beaded rim Grooves on the shoulder Light, coarse, red surface, without slip No 354, MG N B(5) [pl XIV, 5]

10a Fragment of a vessel similar to above The rim is now beaded Grooves round the shoulder, and one inside Fabric also similar No 4615 MG N G(5)

10b Fragment of a vessel similar to above Only one groove round the body Fabric similar but.smoother No 6440 MG N E(5)

10c Fragment rim and part of bulging body of a dish or large bowl, with a beaded rim Smooth burnished red surface with slip half way above the bulge and rim, but black below both inside and outside No 6764 MG N C(5)

Type 11 Rimless Bowls

Comparatively a few sherds of intact rimless bowls in red ware have been recovered As a result there are not many sub types, but each seems to represent a type by itself.

11 Fragment of a rimless bowl, with slightly bulging body, incurved sides, flat base Coarse fabric with red slip inside and outside No 5236 MG.N D(5)

11a Fragment of a very small rimless bowl with slightly bulging body Shallow groove round the edge on the outside Light brown coarse fabric with traces of red slip inside No 6458, MG.N (5)

Type 12 Bowl with Ringed Base

12 Fragment of a large rimless bowl with incurved top, and flat ringed base Coarse, dirty brown ware No 6451 MG N E(5) From the well

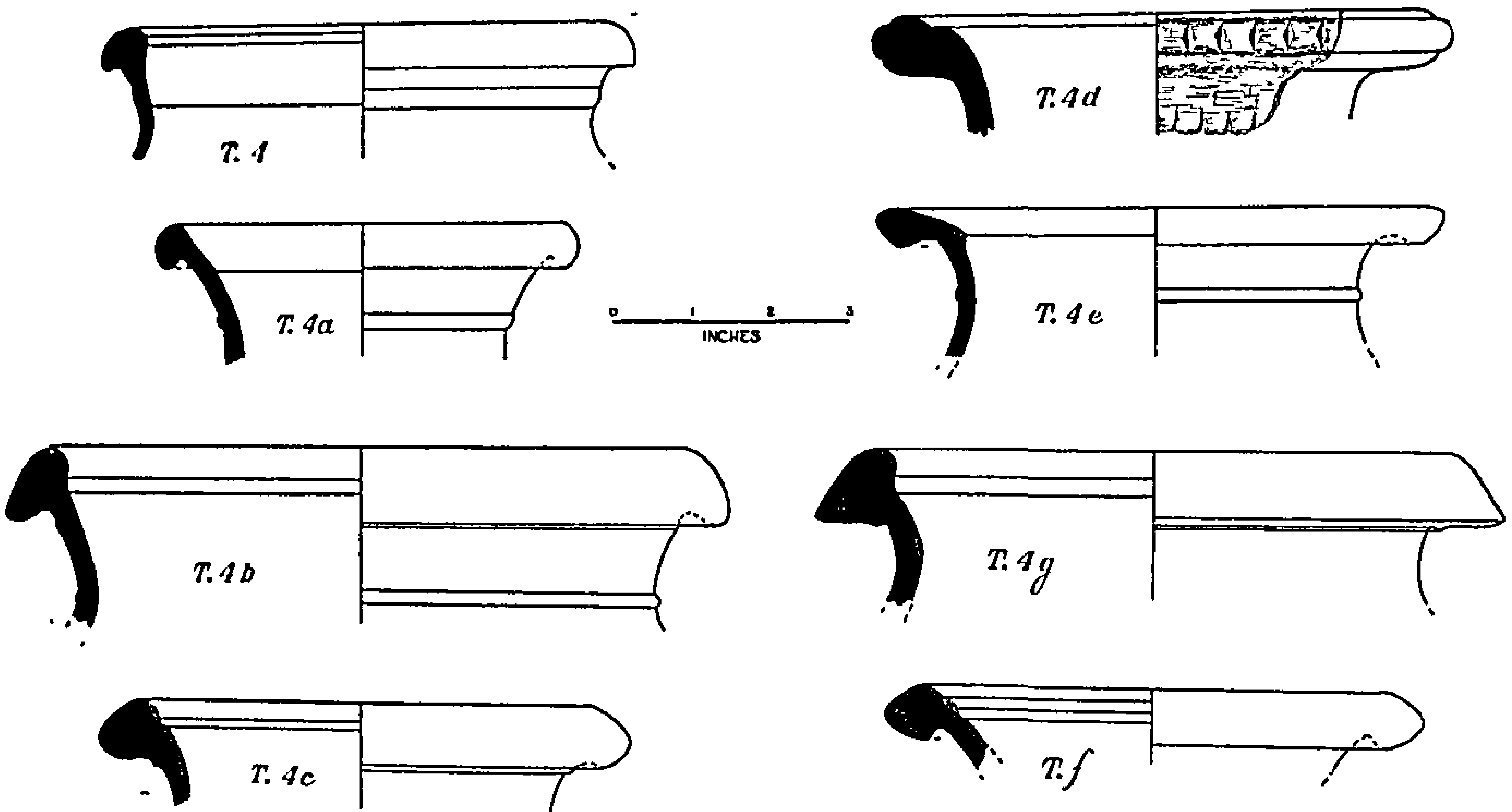


Fig 10 Type 4 Red Ware (Globular Vessels ?) Layer 5, Period II (A)
(See p 54)

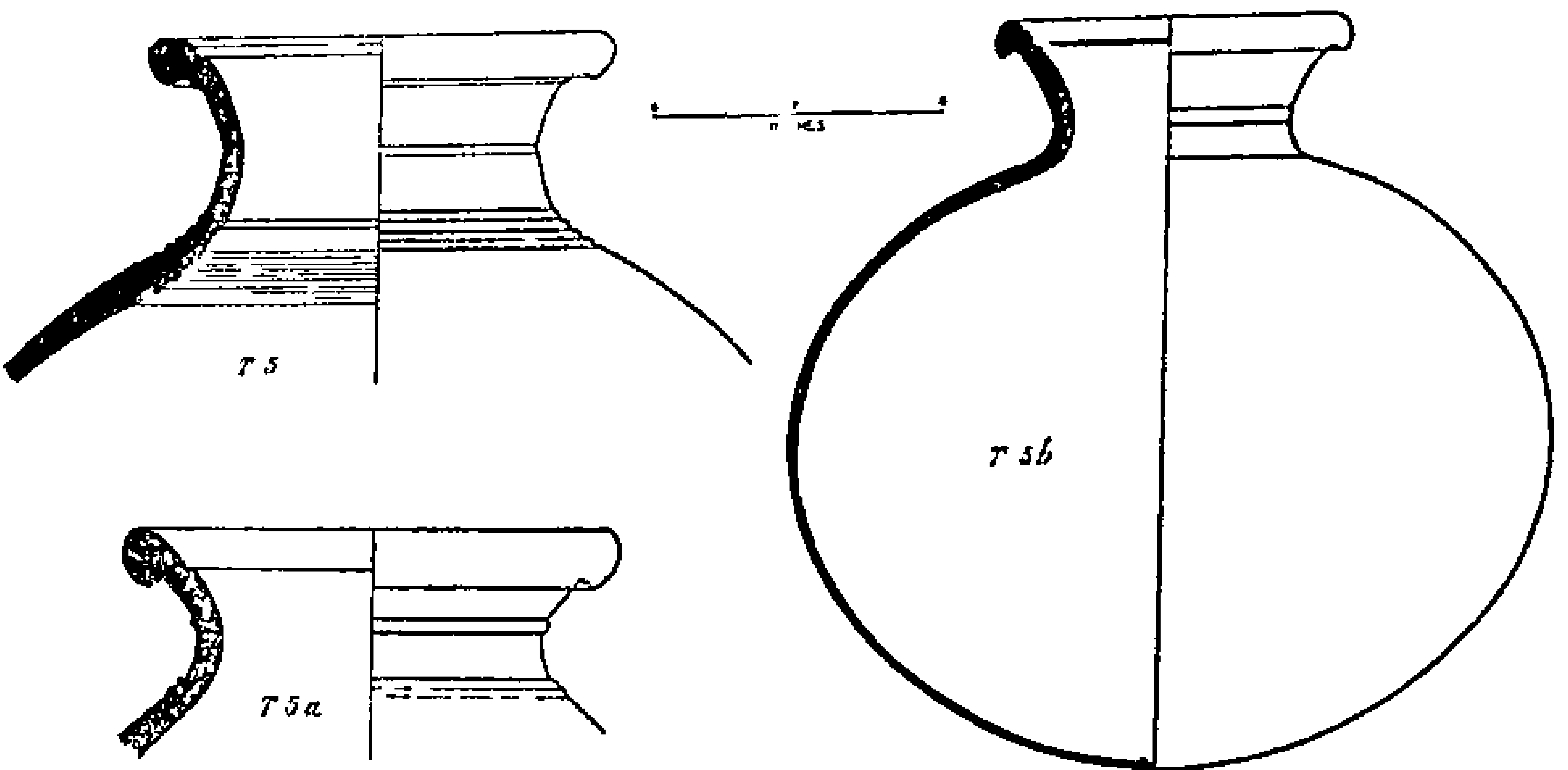


Fig 11 Type 5 Red Ware (Globular Vessels) Layer 5 Period II (?)

(See p 34)



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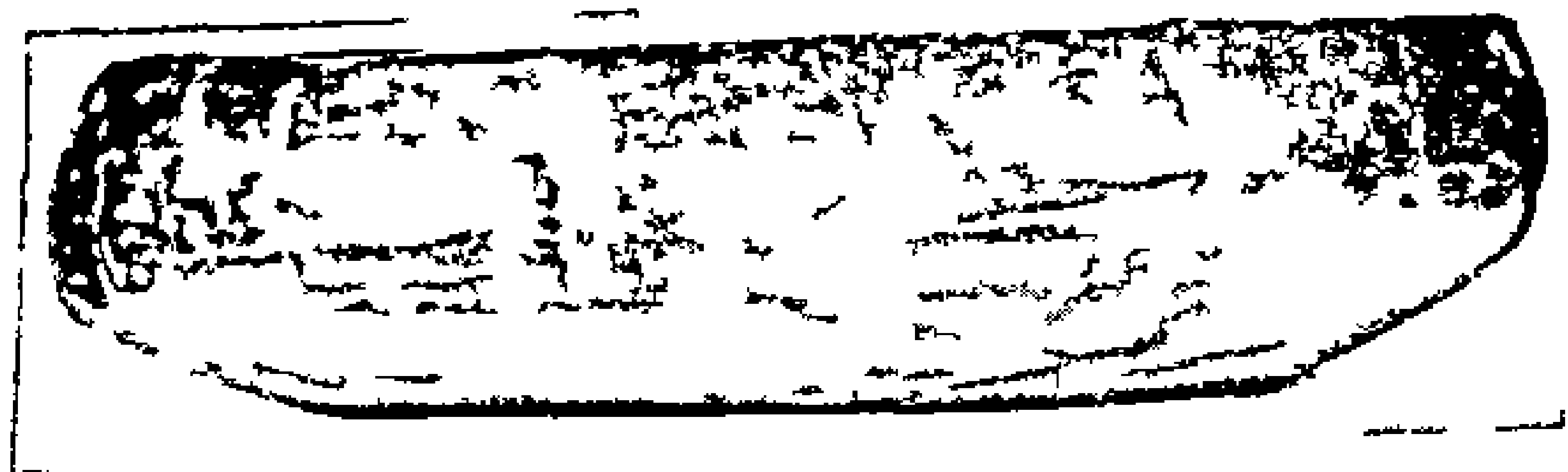


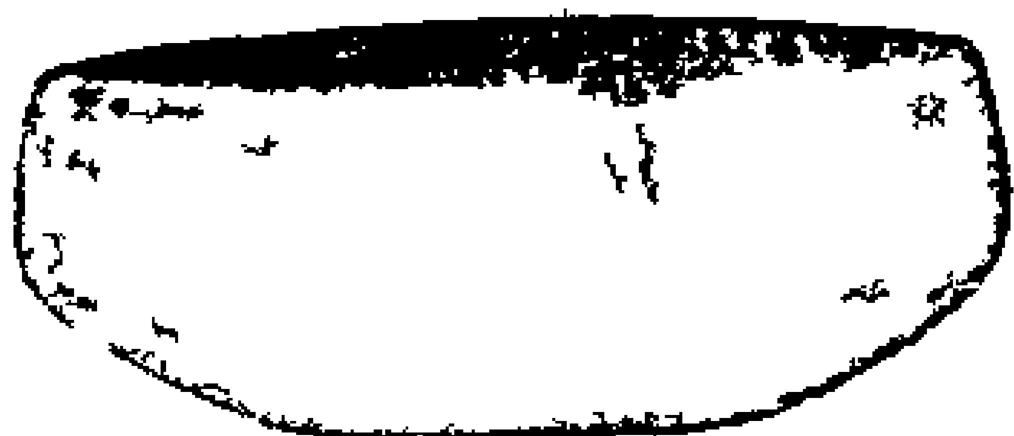
5

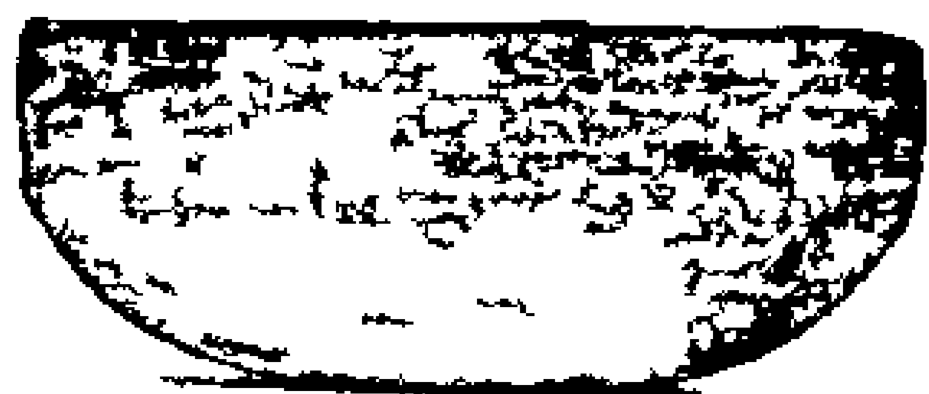


6

Pottery (Types 42 8b 10 8b) excepting No 1 (Period IV) and No 7 T Ia (Period II) the rest of the Period II (*See pp 55, 56, 65 67, 84*)

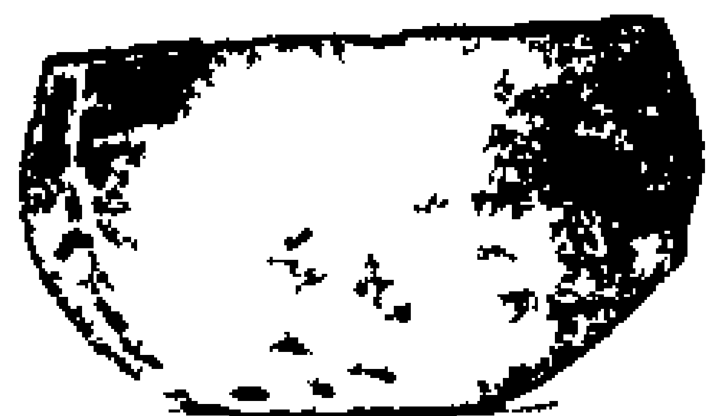

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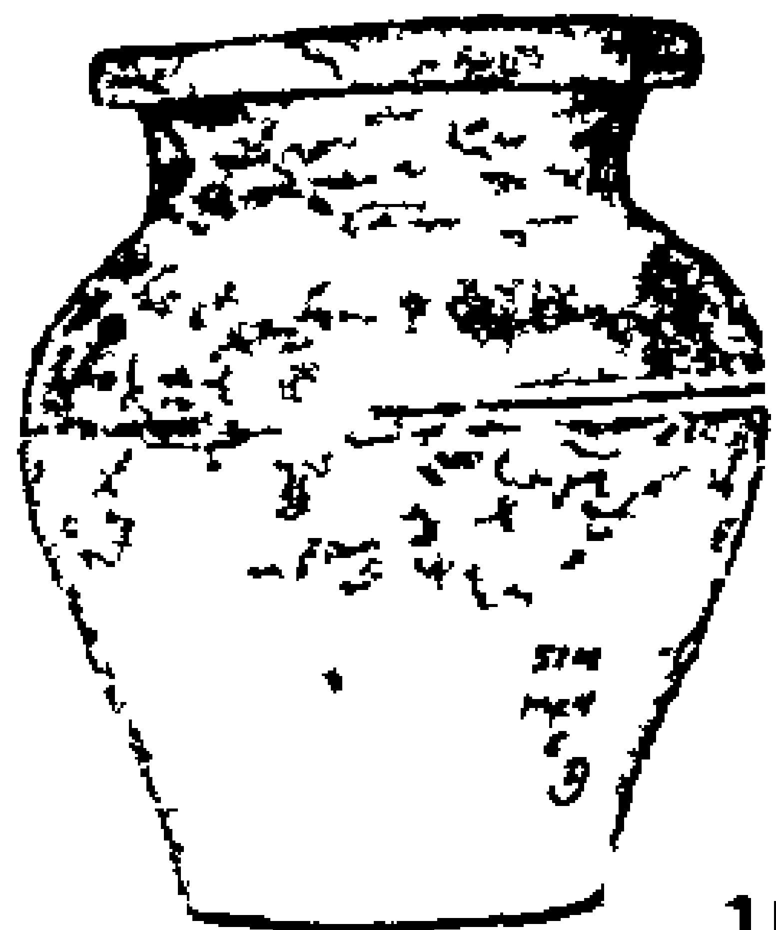

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Po e y (Type 37 35 27 33 34) B ack and Red Wa e Pe od II (S e pi 61 6? (61)

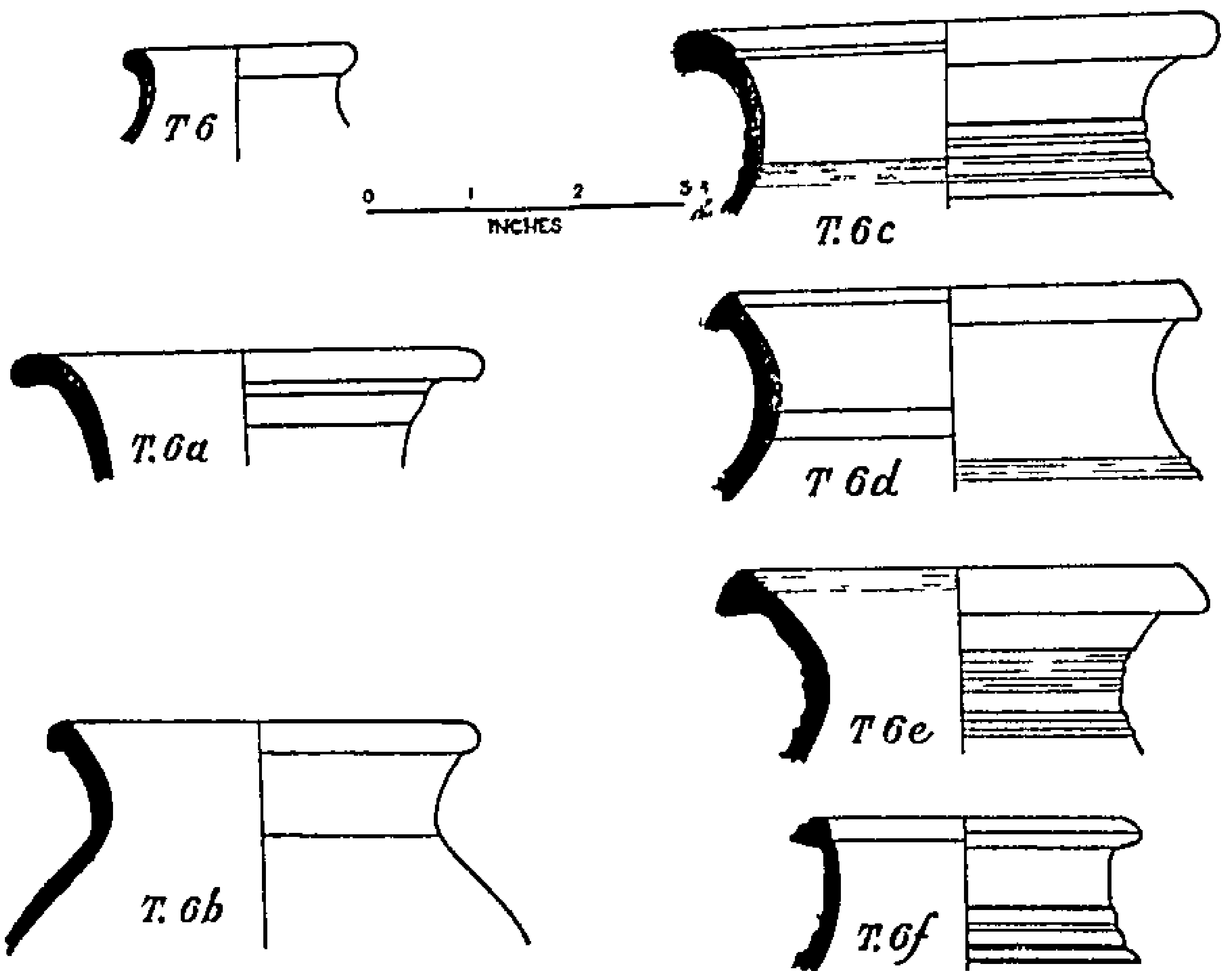


Fig 12 Type 6 Red Ware (small Globular (?) Vessels) Layer 5 Period II (A)
(See pp 51 55)

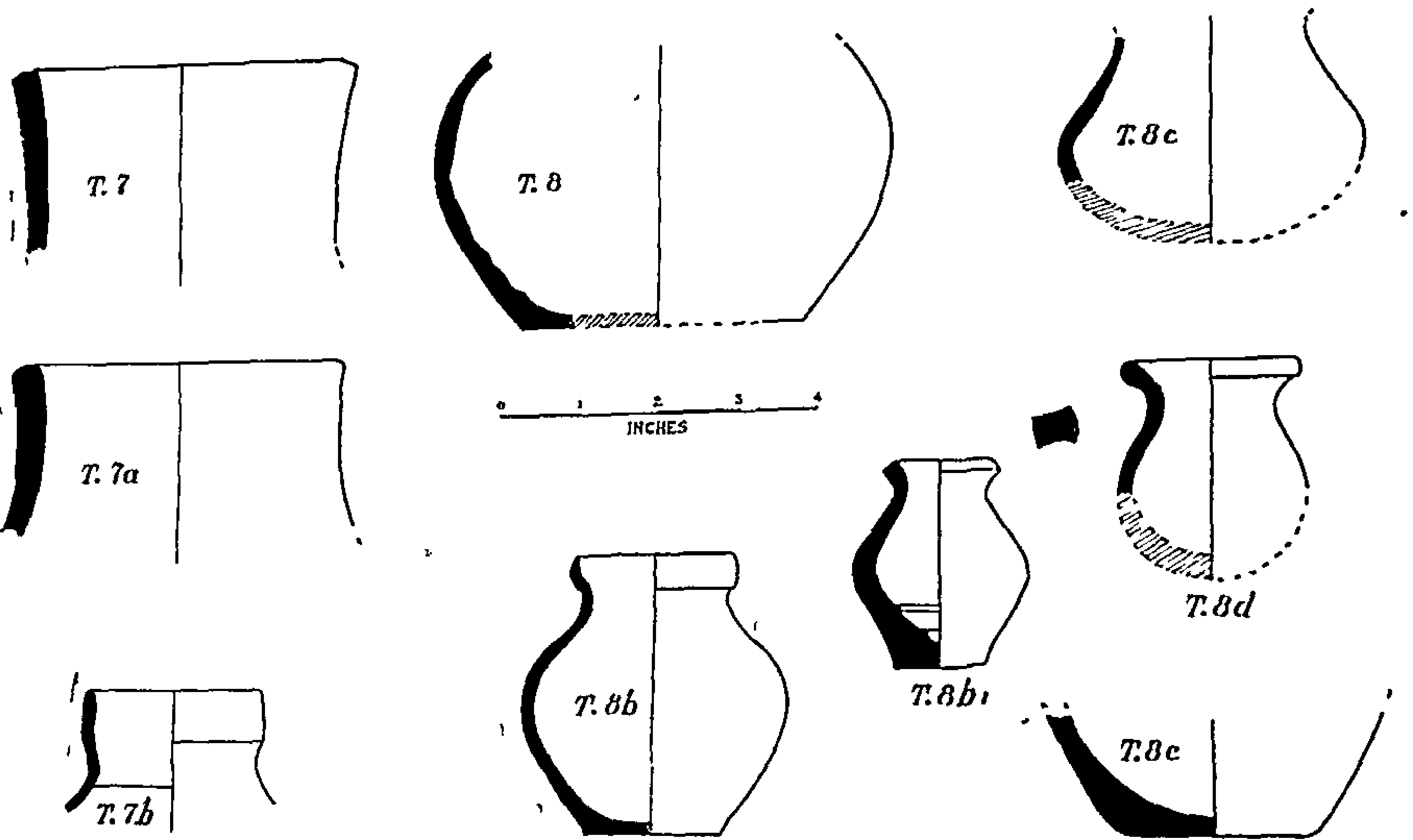


Fig 13 Type 7 8 Red Ware (Straight necked and other vessels) Layer 5 Period II (A)
(See p 55)

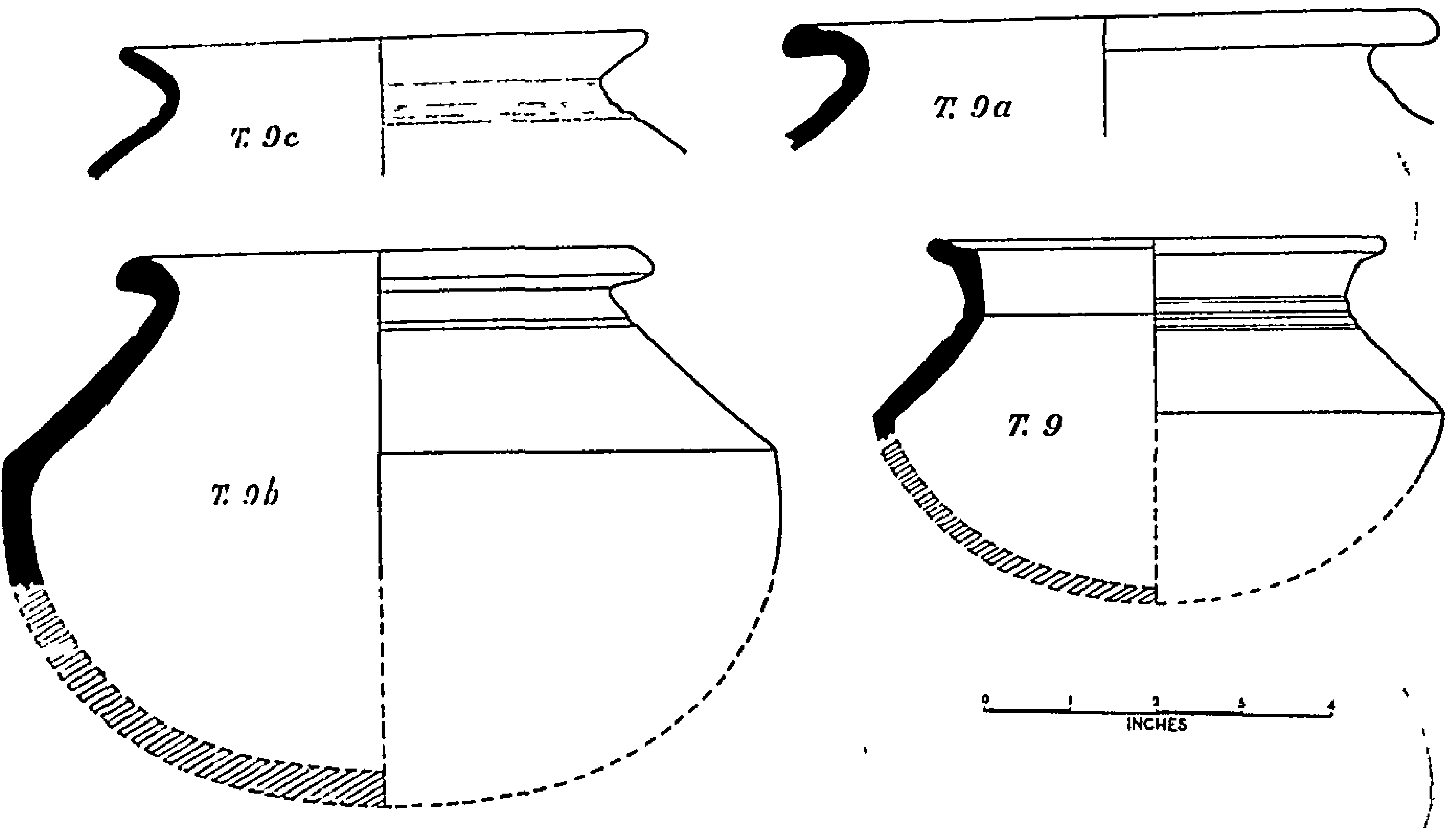


Fig 14 Type 9 Red ware (vessels with carinated shoulder) Layer 5 Period II (A)

(See p. 56)

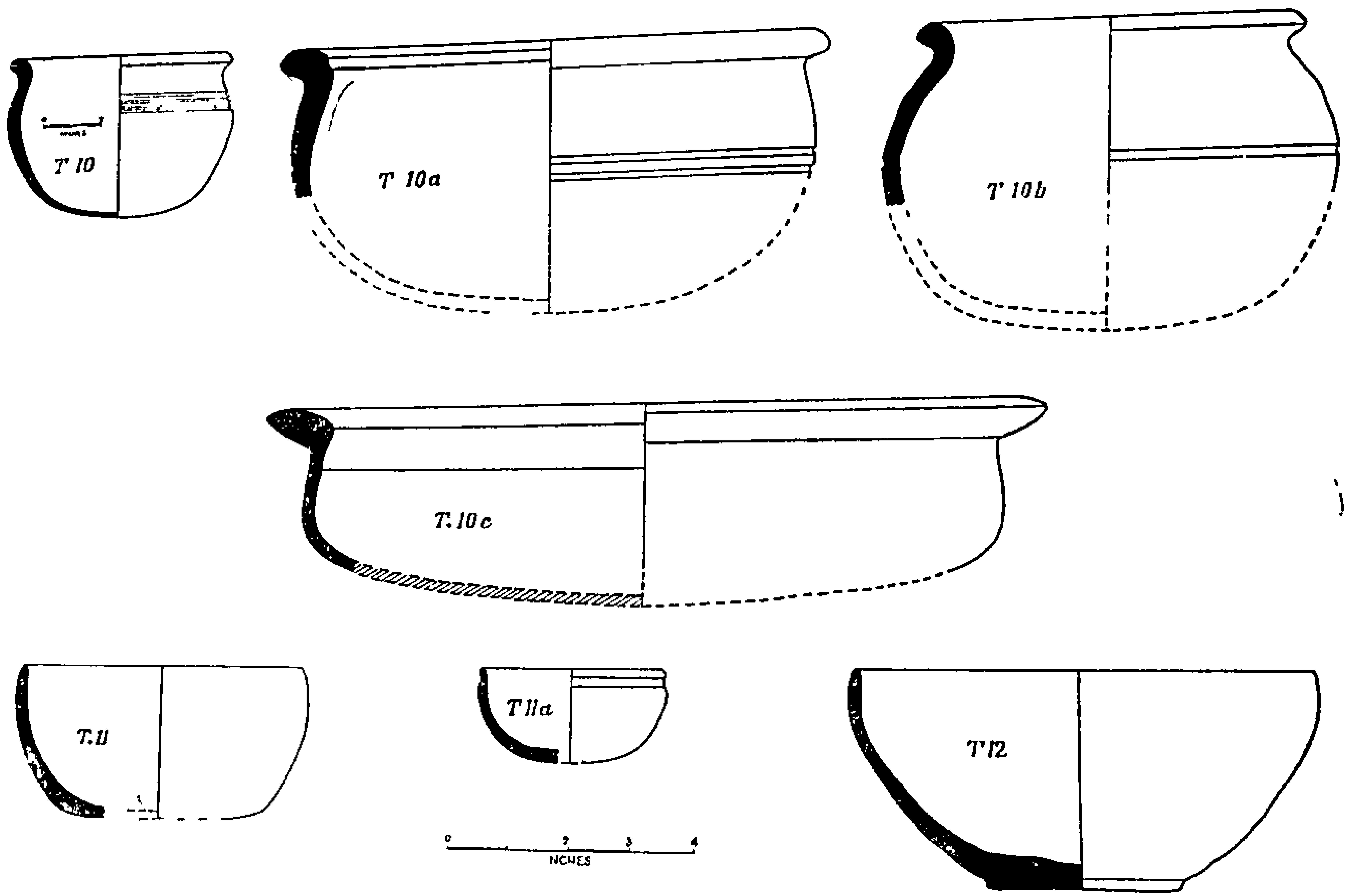


Fig 15 Types 10–12 Red ware (Bowls and Dishes) Layer 5 Period II (A)
(See p 56)

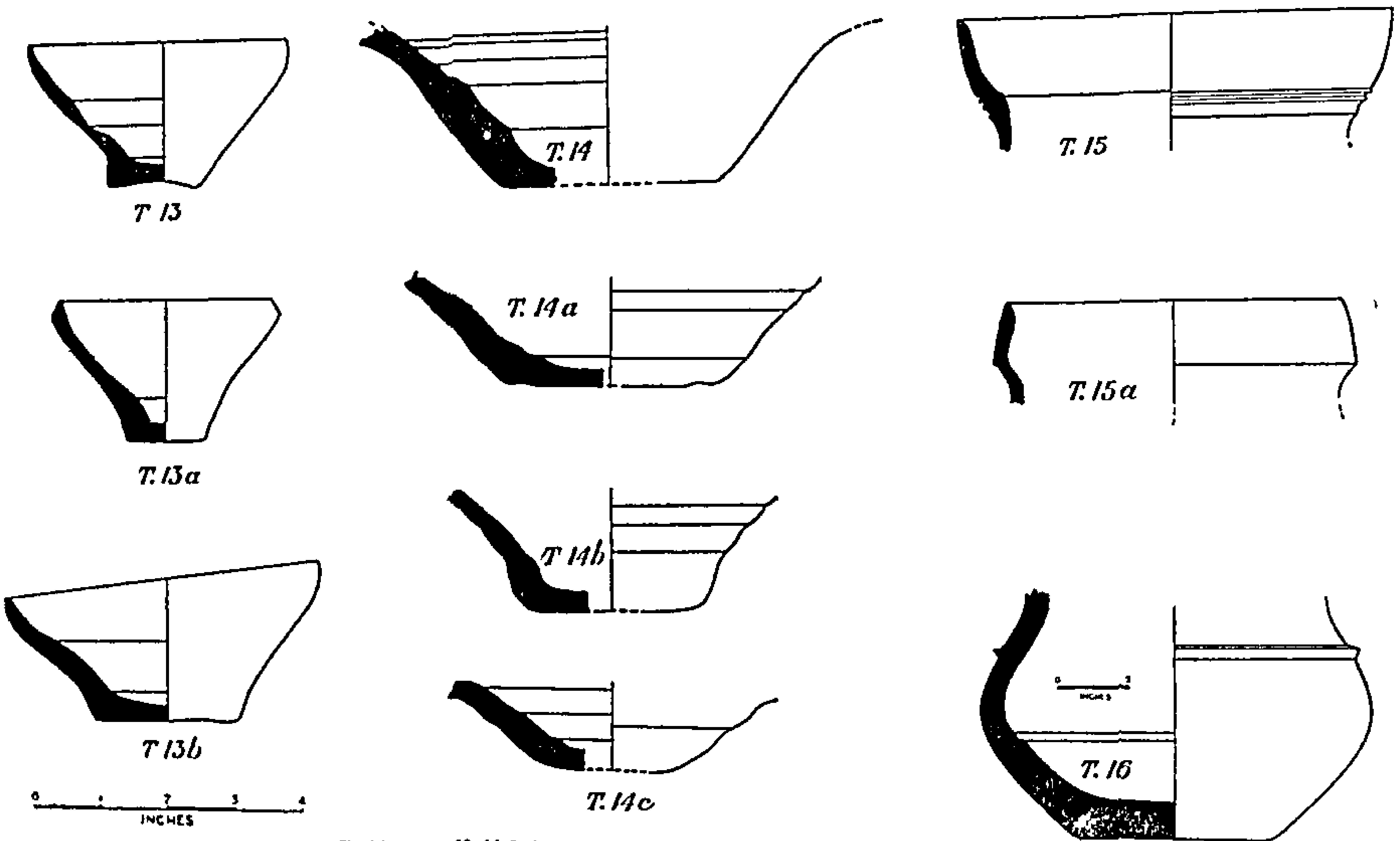
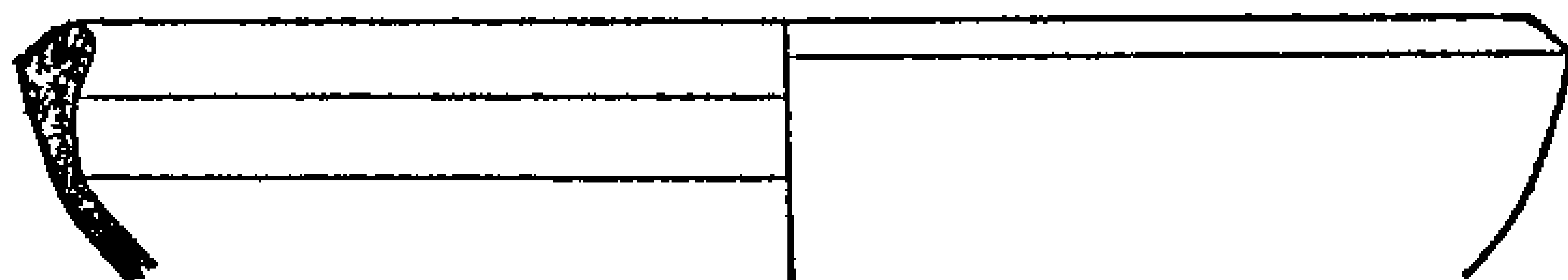
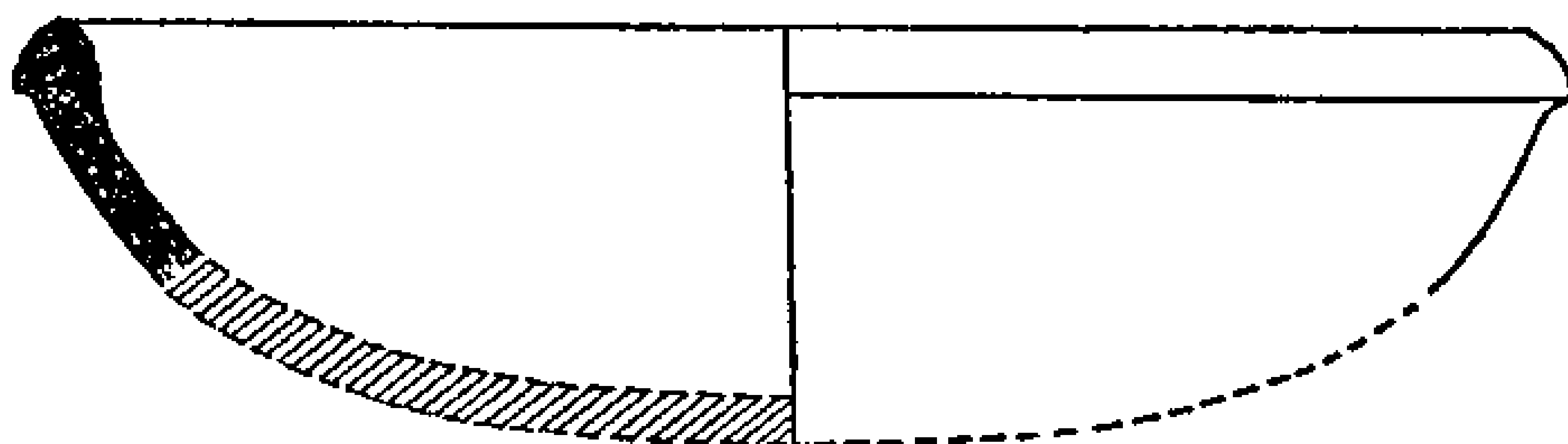


Fig 16 Types 13–16 Red ware (Shallow bowls and other vessels) Layer 5, Period II (A)
(*See pp 57 58*)



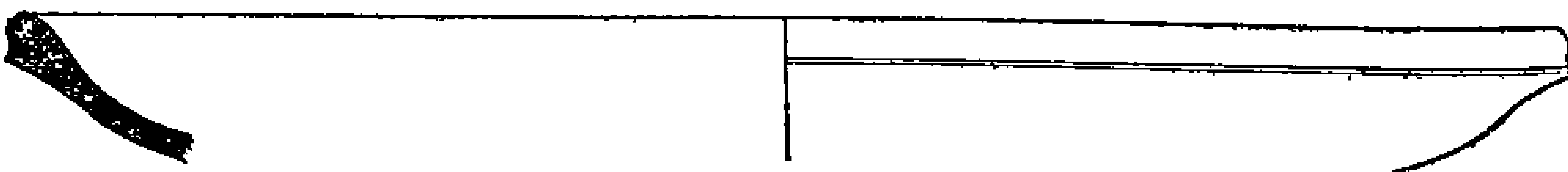
T.17



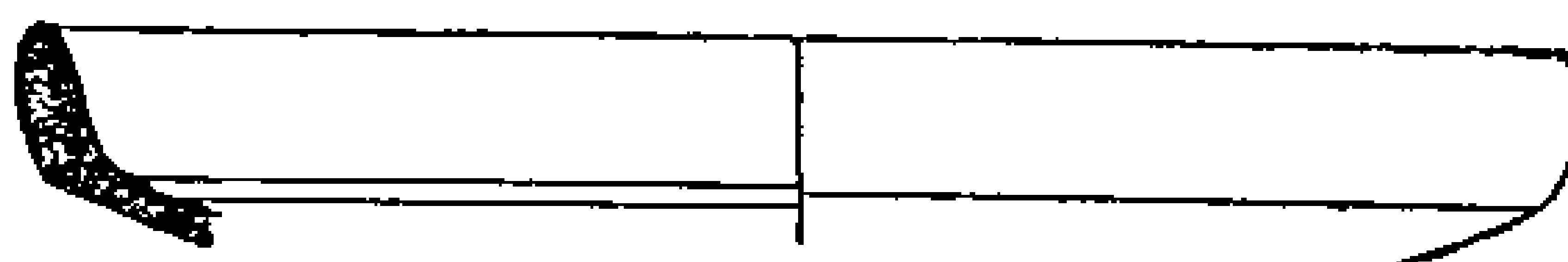
T.17 a



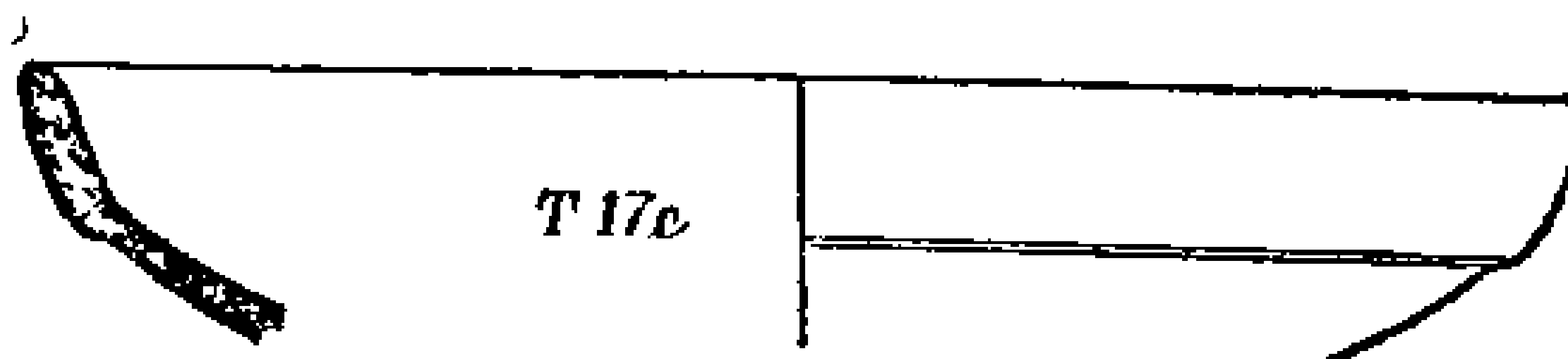
T.17 b



T.17 c



T.17 d



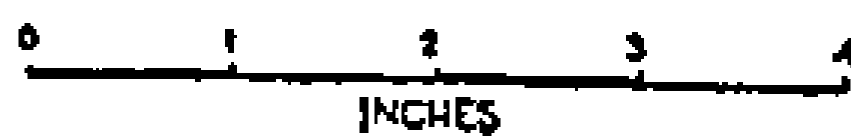


Fig 17 Type 17 Red ware (Dishes or Lids) Layer 5, Period II (A)
(*See pp 57-58*)

Fig 16. (13, 13a 13b, 14, 14a 14c, 15, 15a, 16)

Type 13 Bowls

13 Small rimless bowl with incurved edge steeply sloping sides ending in a narrow, projected flat base, having uneven surface Coarse brown fabric No 5238a, MG N (5)

13a Fragment of a similar bowl with angular edge and more regular surfaces No 6471, MG N E(5) From the well

13b Small rimless bowl, with more symmetrical features Dark brown coarse surfaces No 5238b, MG N E (5) From the well

Type 14

14 Fragment of a vessel probably bowl with thick flaring sides and flat base Broad concentric corrugations inside Fabric coarse but covered with thick reddish wash inside and outside No 4559 MG N C(5)

14a Fragment of a vessel similar to T 14 but without internal corrugations The fabric is very coarse and gritty No 6471a MG N G(5)

14b Fragment of a vessel with a flat base and flaring side The latter is rounded at the base Very coarse gritty fabric No 6471, MG N G(5)

14c Fragment of a vessel with flaring side having shallow inner corrugations reddish slip surfaces smoothed No 6772 MG N G(5)

Type 15 Broad Mouthed vessels—but exact shape indeterminate

15 Fragment of a broad mouthed vessel with slightly concave flaring rim Three grooves outside round the neck Fine fabric with smooth polished red surfaces No 4602 MG N E(5)

15a Fragment of a broad mouthed vessel with straight but slightly inturned rim Fine fabric with smooth polished red surfaces No 4607 MG N F(5)

Type 16 Broad Mouthed vessel with Flat Base

16 Medium sized vessel with broad mouth (its top broken) very thick sides and flat base Raised band round the middle of the body Very coarse fabric with uneven red surfaces The base is definitely handmade No 5046 MG N E(5) [The vessel resembles a type of flower pot or the *Kumbha* water vessel shaped base (a kind of moulding of pillars) in Indian architecture] [pl XIII, 1]

Fig 17 (17, 17a 17e)

Type 17 Dishes (or Lids)

This type is represented by a number of sherds And one specimen has been completely reconstructed This gives us a medium sized vessel, with low, wide mouth, and tapering base Such a vessel cannot be called a *Thālī*, the ordinary Indian dish for taking the daily meals For the latter has a broader and flatter base (*Cf* below, polished Black ware, 'Megalithic' type) The former is something like a soup plate , still it can be a good lid From an examination of its inner side, there were chances of the type

being used as a dish or plate It could also have served as a begging bowl for a monk, (though at present it reminds one of the American steel helmets used during the last war)

From the nature of the rim and the curvature of the base, a number of sub types may be distinguished And were the sherds not found from one layer, it might have been possible to reconstruct an evolutionary sequence Even now, one may visualize an evolution in the shape from almost a flat, nearly rimless dish to a vessel with pronounced, rounded, tapering base, having a thick, broad, cut rim

17 Fragment dish or lid with a thickened slightly inturned edge Coarse red surfaces No 2181 MG N A(5)

17a Fragment dish or lid with a similar but slightly cut edge Traces of red slip inside and outside No 2468 MG N E(5)

17b Fragment very shallow dish or lid with a well faceted edge Coarse red surfaces No 2177 MG N A(5)

17c Fragment broad shallow dish with a thickened edge having a groove Coarse red surfaces No 2388 MG N D(5)

17d Fragment lid or dish with a broad thick slightly inturned rim Coarse red surfaces No 2294 MG N D(5)

17e Fragment lid or dish with a broad edge slightly outturned and undercut Coarse red surfaces No 2184 MG N A(5)

Fig 17a (17f 17j)

17f Fragment dish or lid rim thickened which is turned in and sharpened Traces of red slip No 2469 MG N E(5)

17g Fragment dish or lid The edge has now a rim like broad band with a ledge No 2451 MG N B(5)

17h Fragment dish or lid having a small protrusion at the edge No 6521 MG N B(5)

17i Fragment dish or lid the edge turned in with a carination No 2305 MG N D(5)

17j Fragment dish or lid the edge thickened turned in and having a small groove below the rim No 2464, MG N E(5)

Fig 18 (18a 18f)

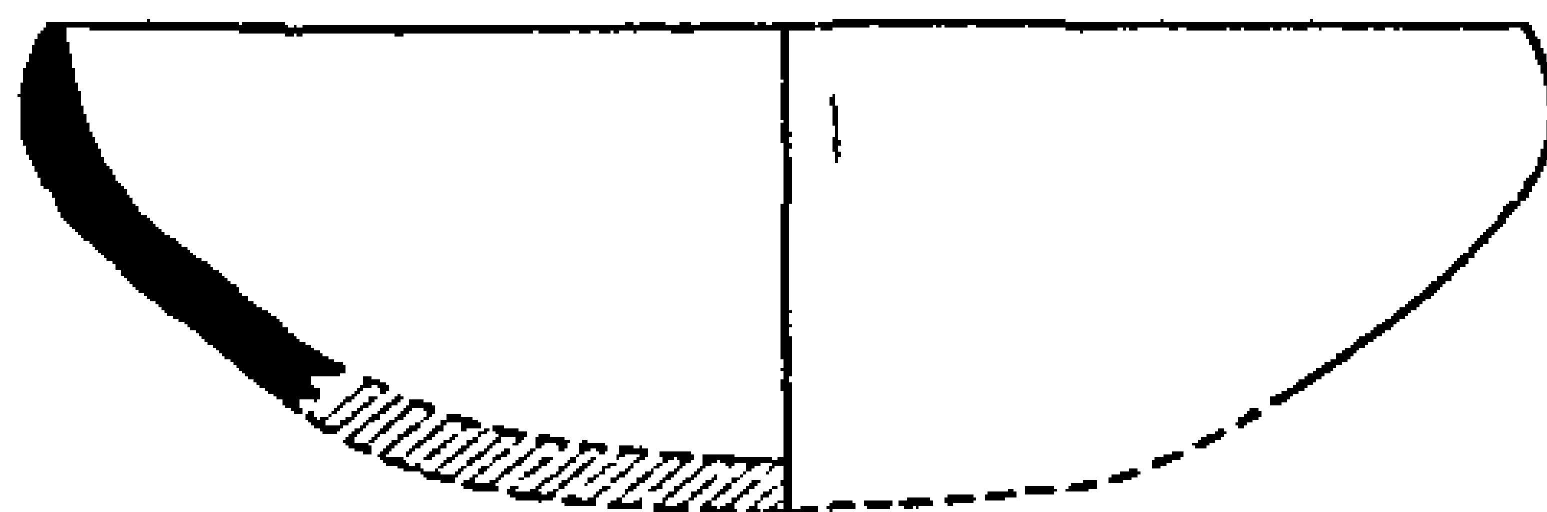
Type 18

18 Fragment dish or lid with almost straight edge having a thin groove below the rim No 2[illegible]00 MG N B(5)

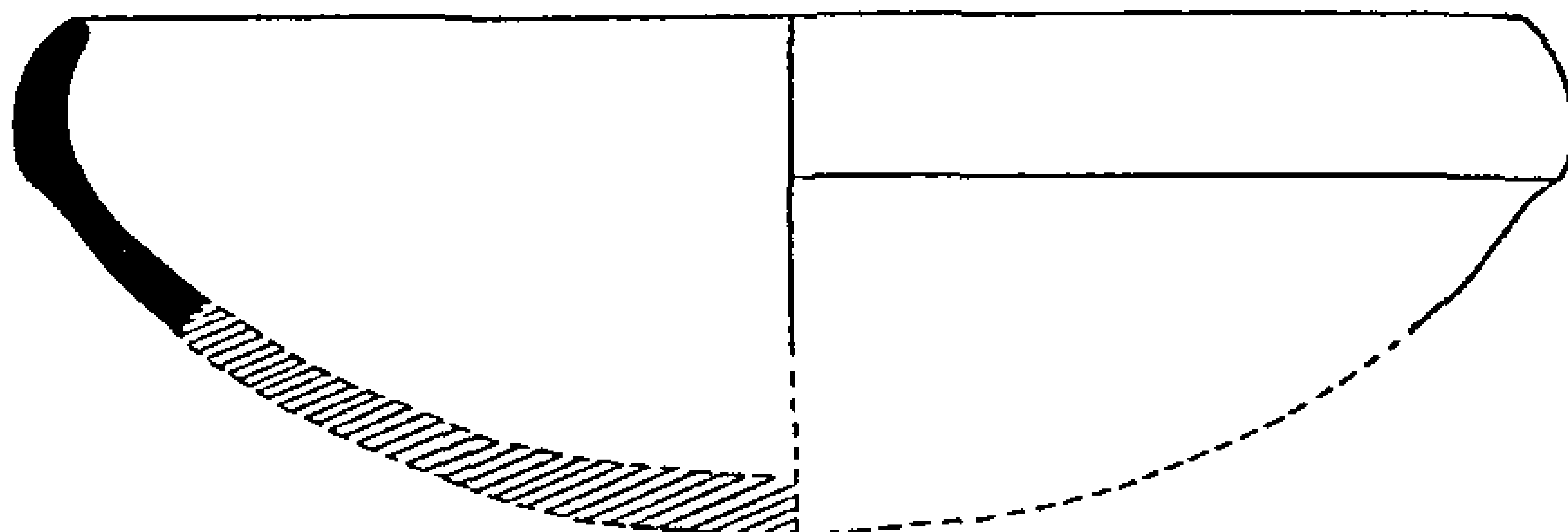
18a Dish or lid now reconstructed with a thick slightly turned in sharpened edge cut below the rim No 5[illegible]32 MG N E(5) [Pl XIII 2]

18b Fragment dish or lid well cut below the rim No 2470 MG N F(5)

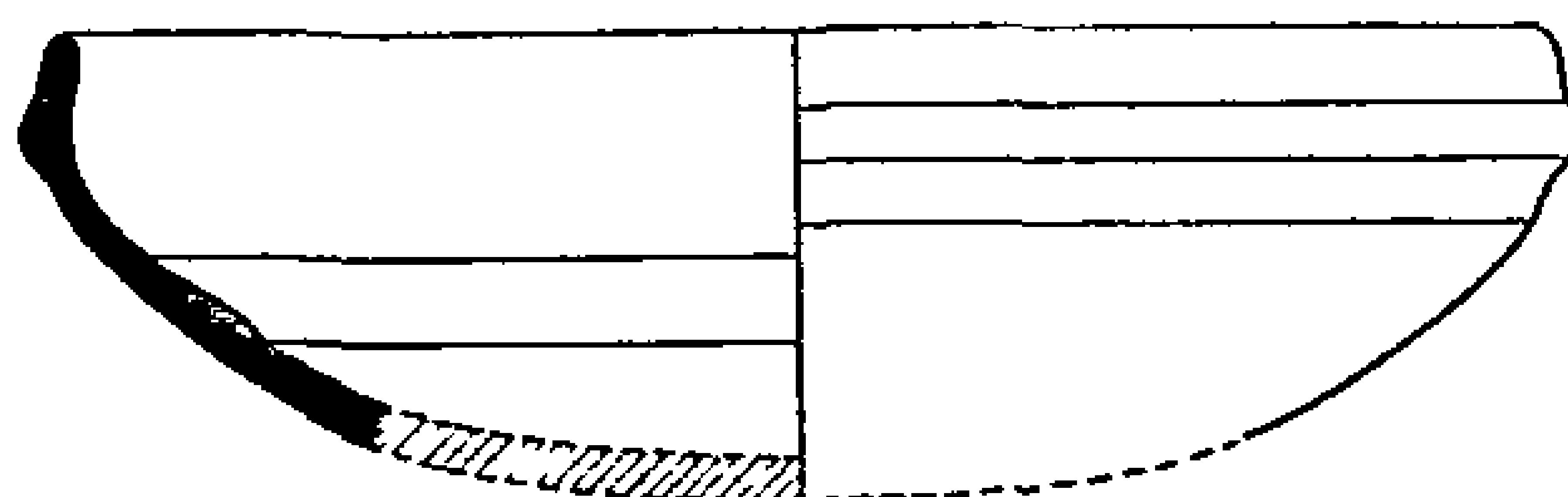
18c Fragment dish or lid thin rim band with sharp edge and grooves below the rim No 2450 MG N E(5)



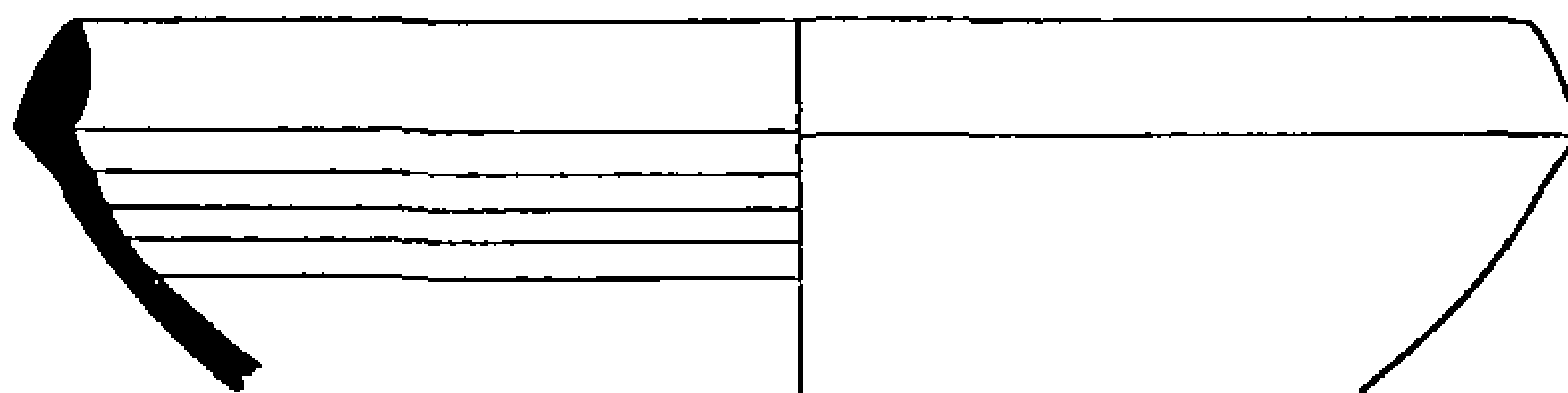
T.17*f*



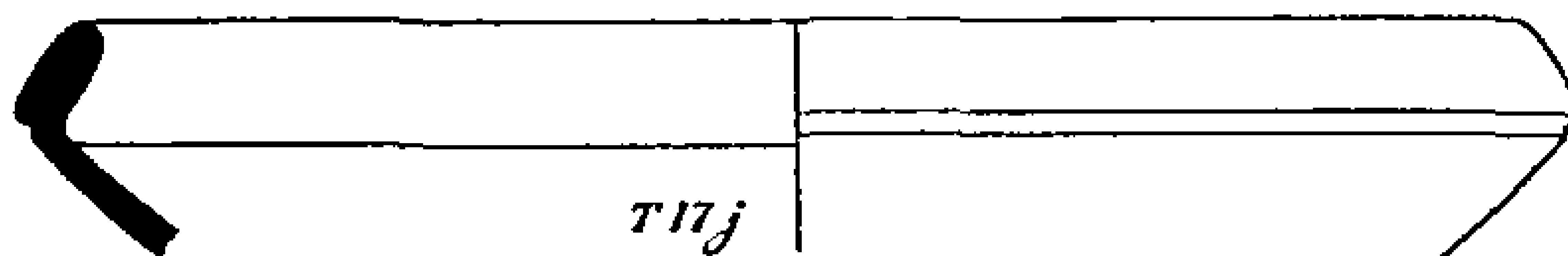
T 17*g*



T 17*h*



T 17*i*



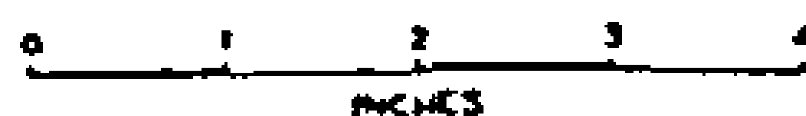


Fig 17a Type 17 Red ware (Dishes or Lids) Layer 5, Period II (A)

(See p 58)

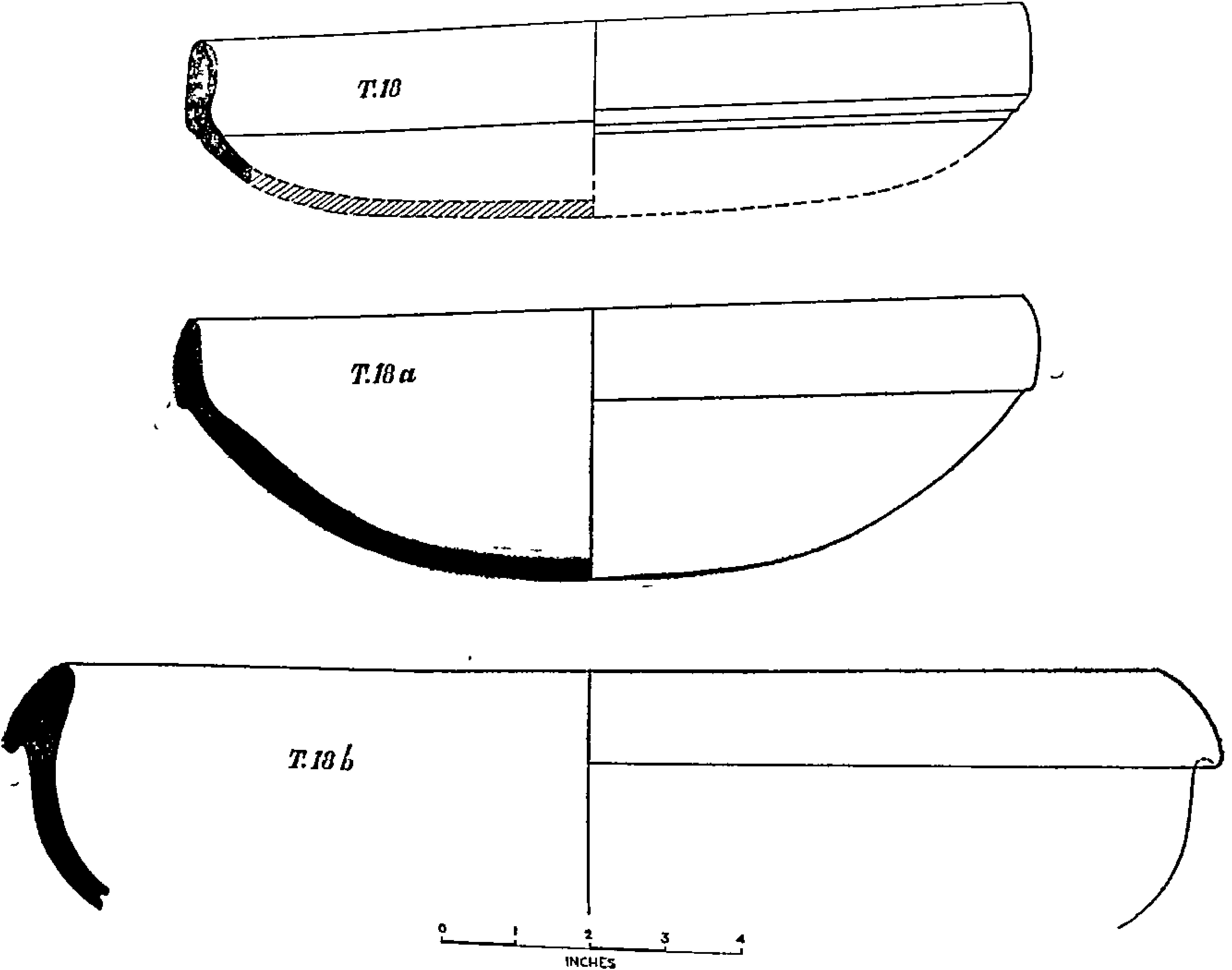


Fig 18 Type 18 Red ware (Dishes or Lids) Layer 5, Period II (A)

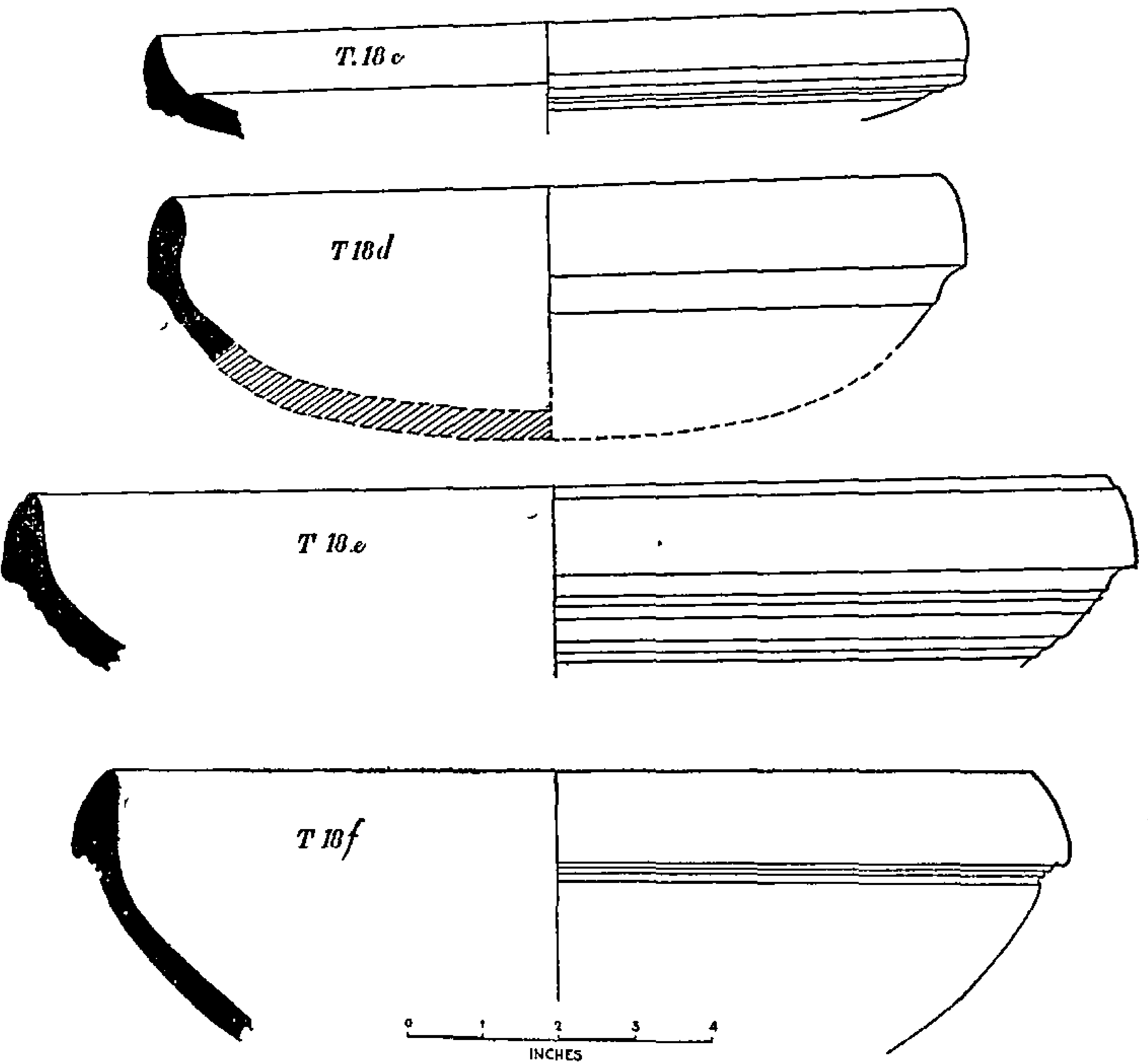


Fig 18a Type 18 Red ware (Dishes or Lids) Layer 5, Period II (A)
(See pp 58 59)

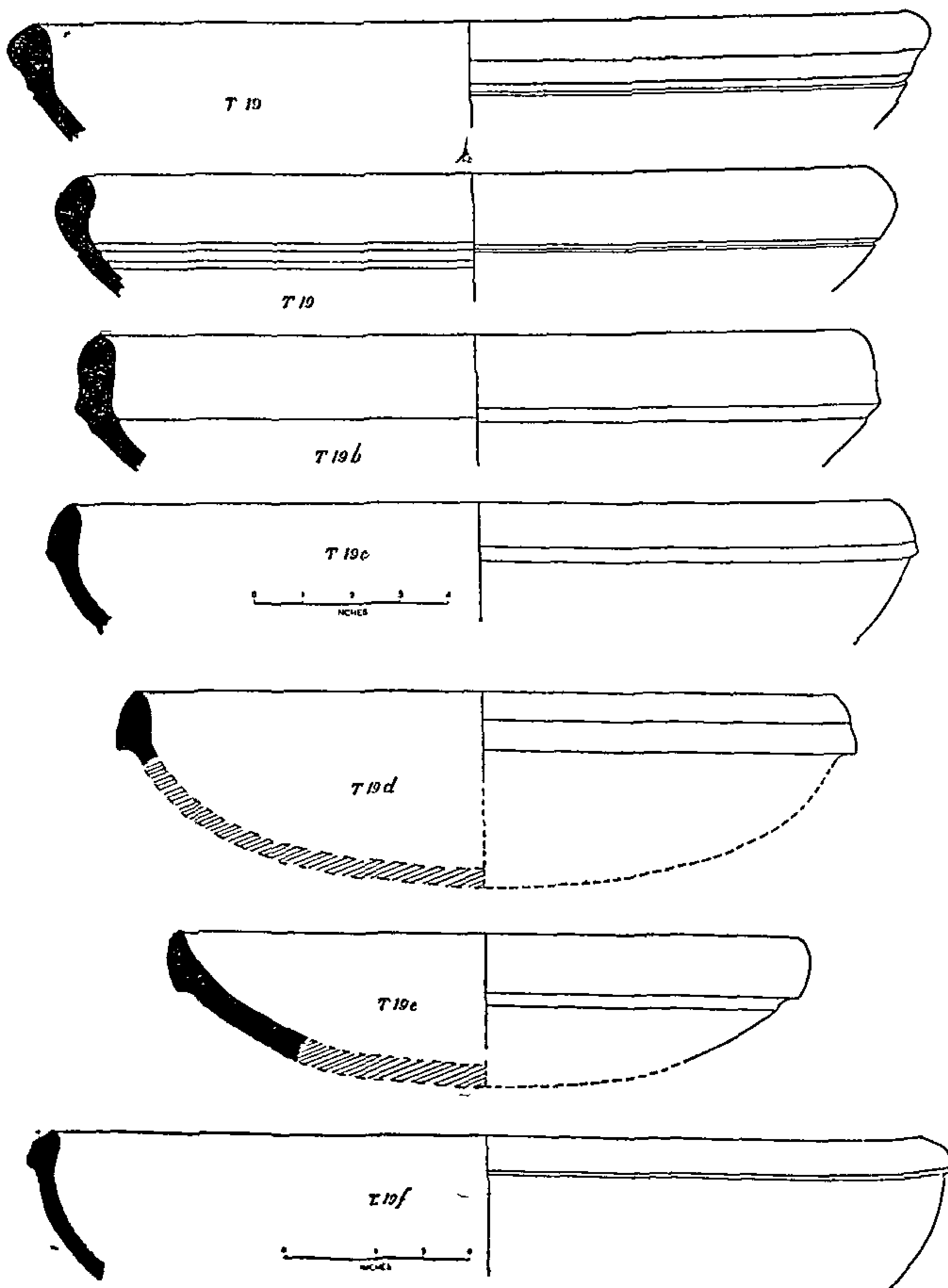
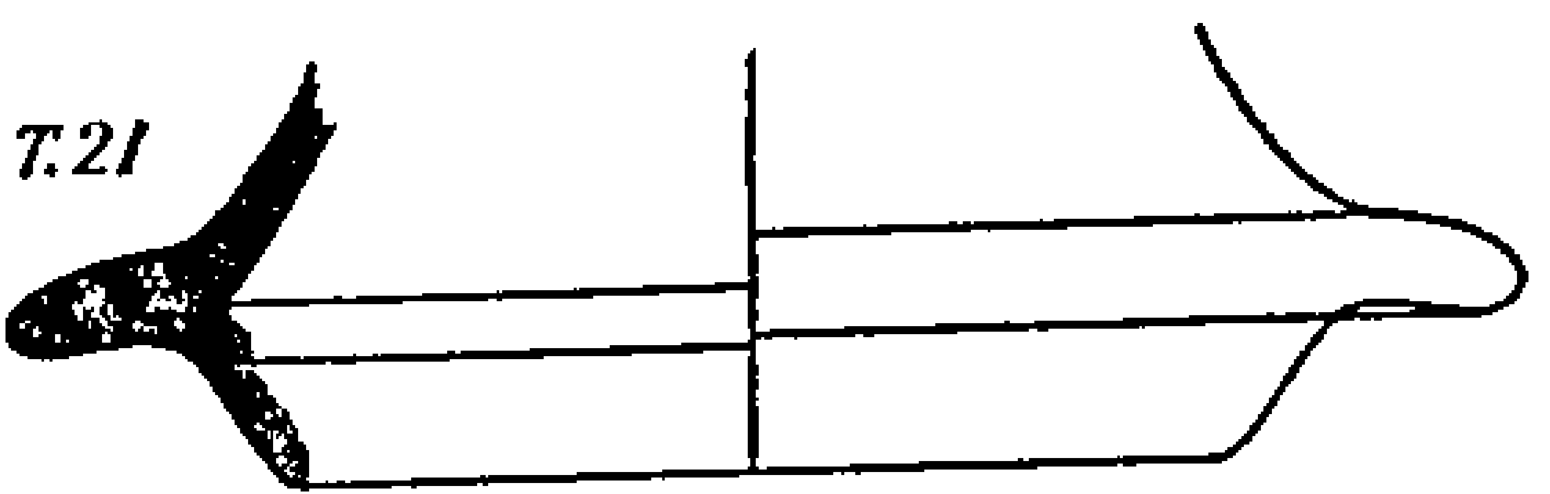
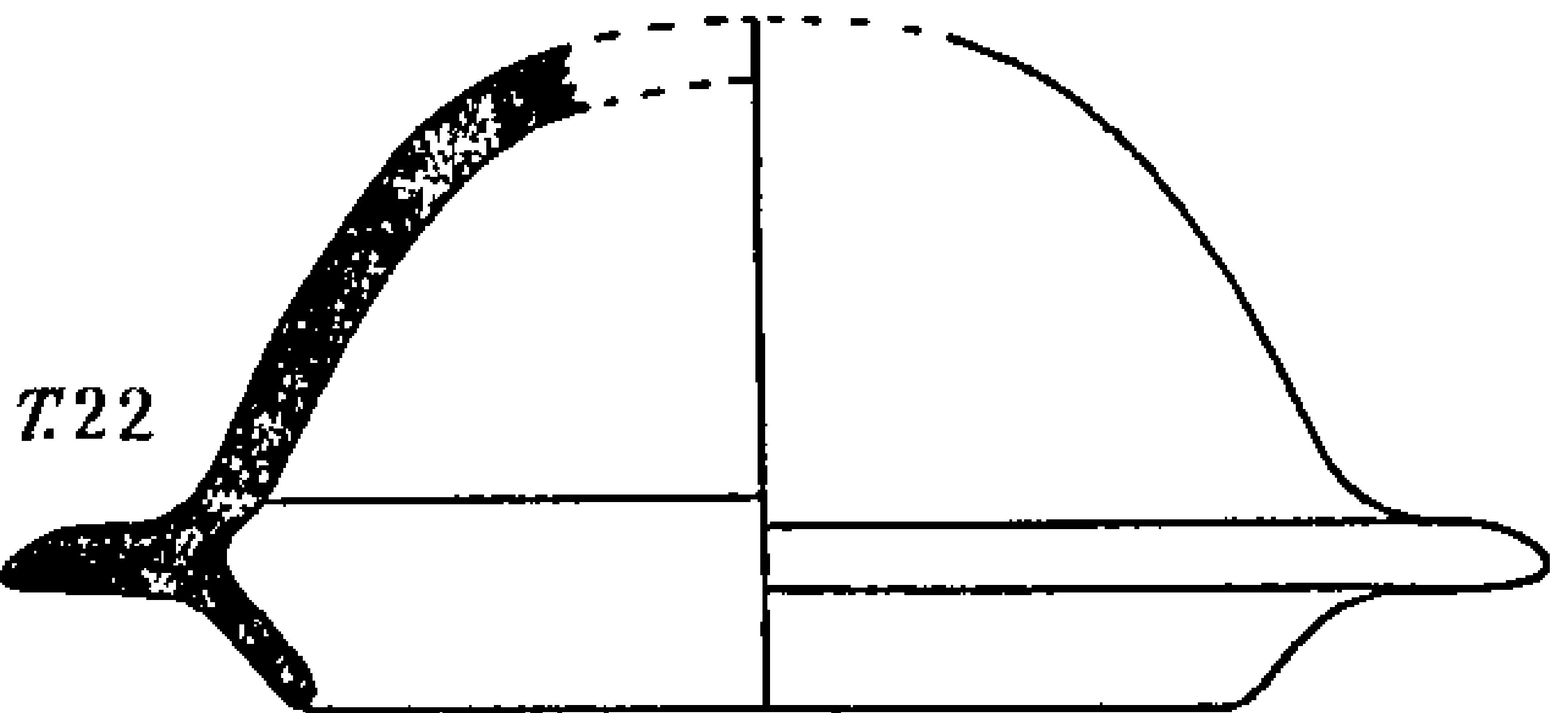
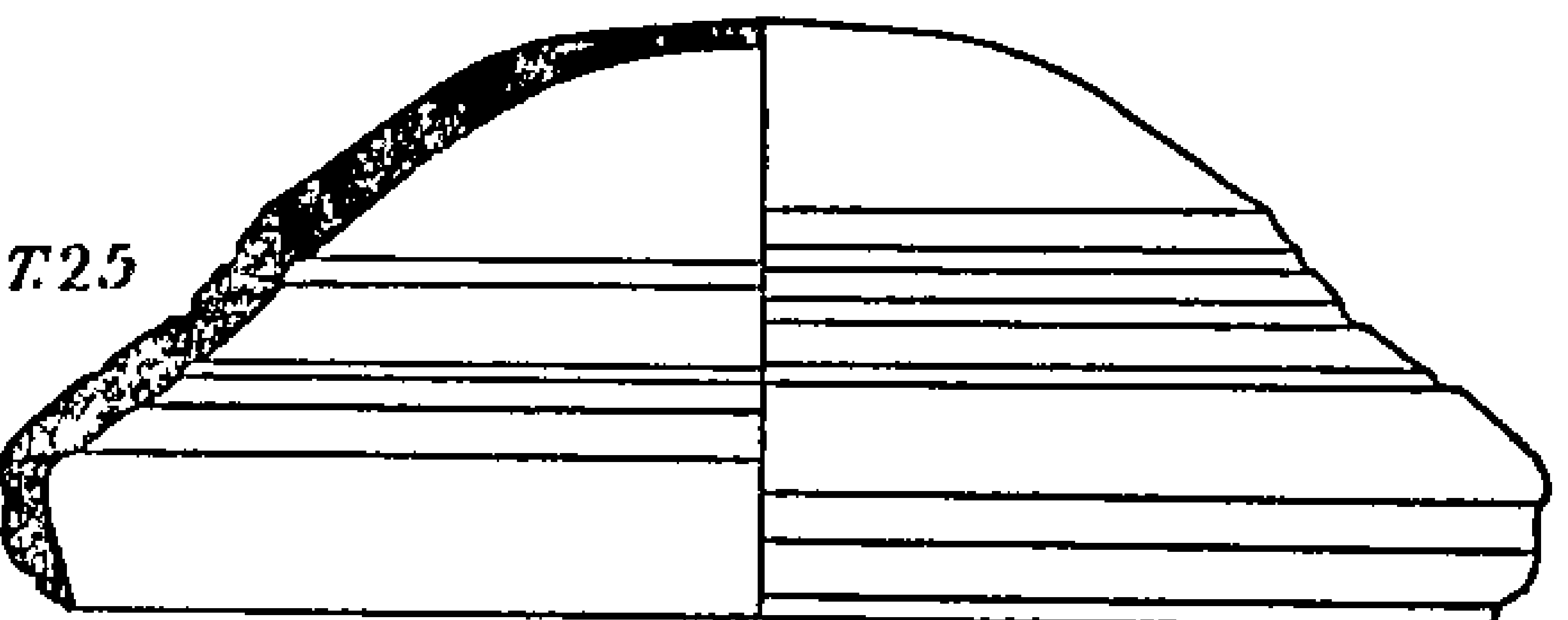
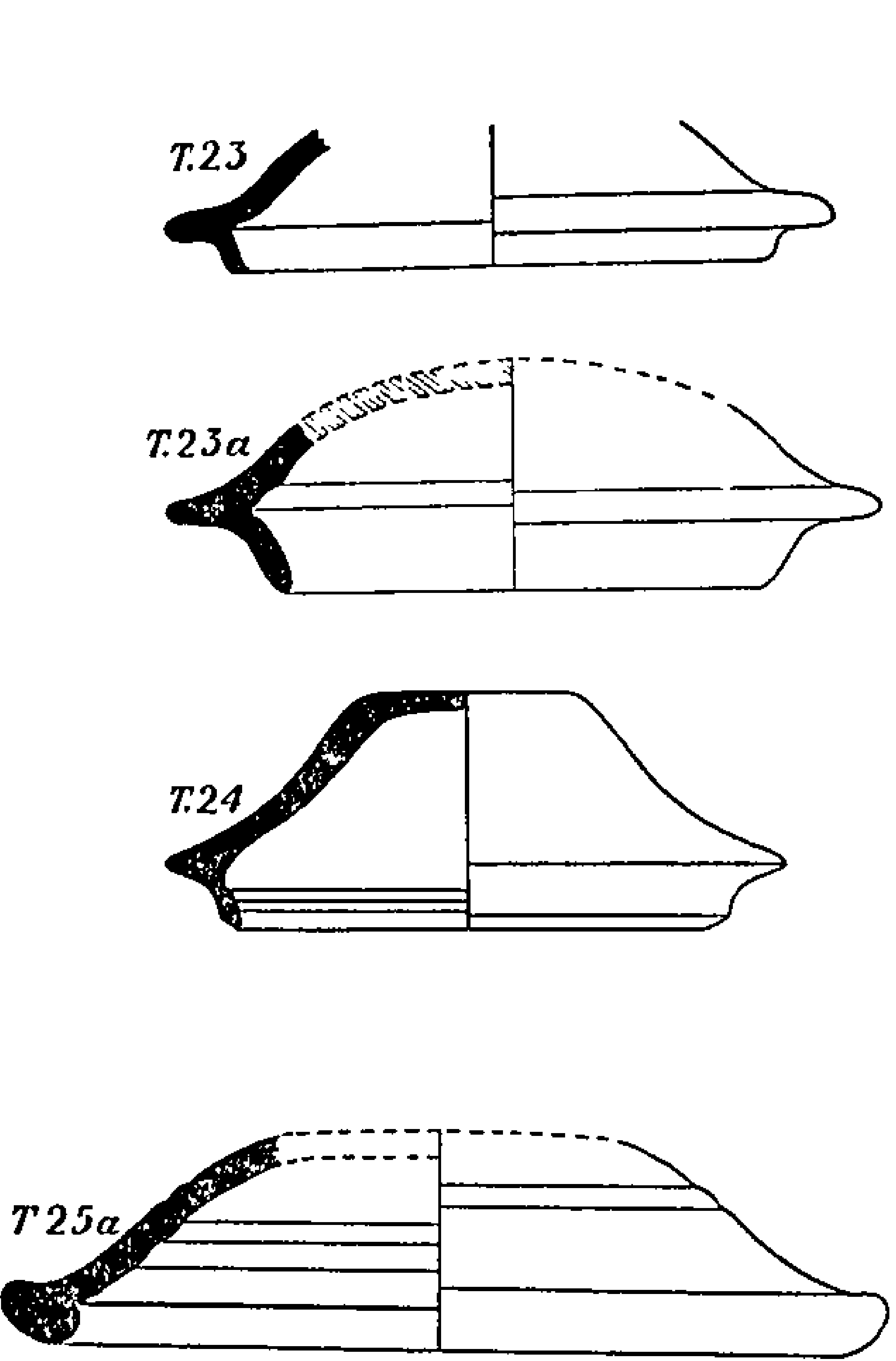


Fig 19 Type 19 Red ware (Dishes or Lids) Layer 5 Period II (A)
(See p 39)









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INCHES

(Type 20 shown with Type 37 See Fig 26),
Fig 20 Types 21–25 Red ware (Lids) Layer 5, Period II (A)
(See pp 59 60)

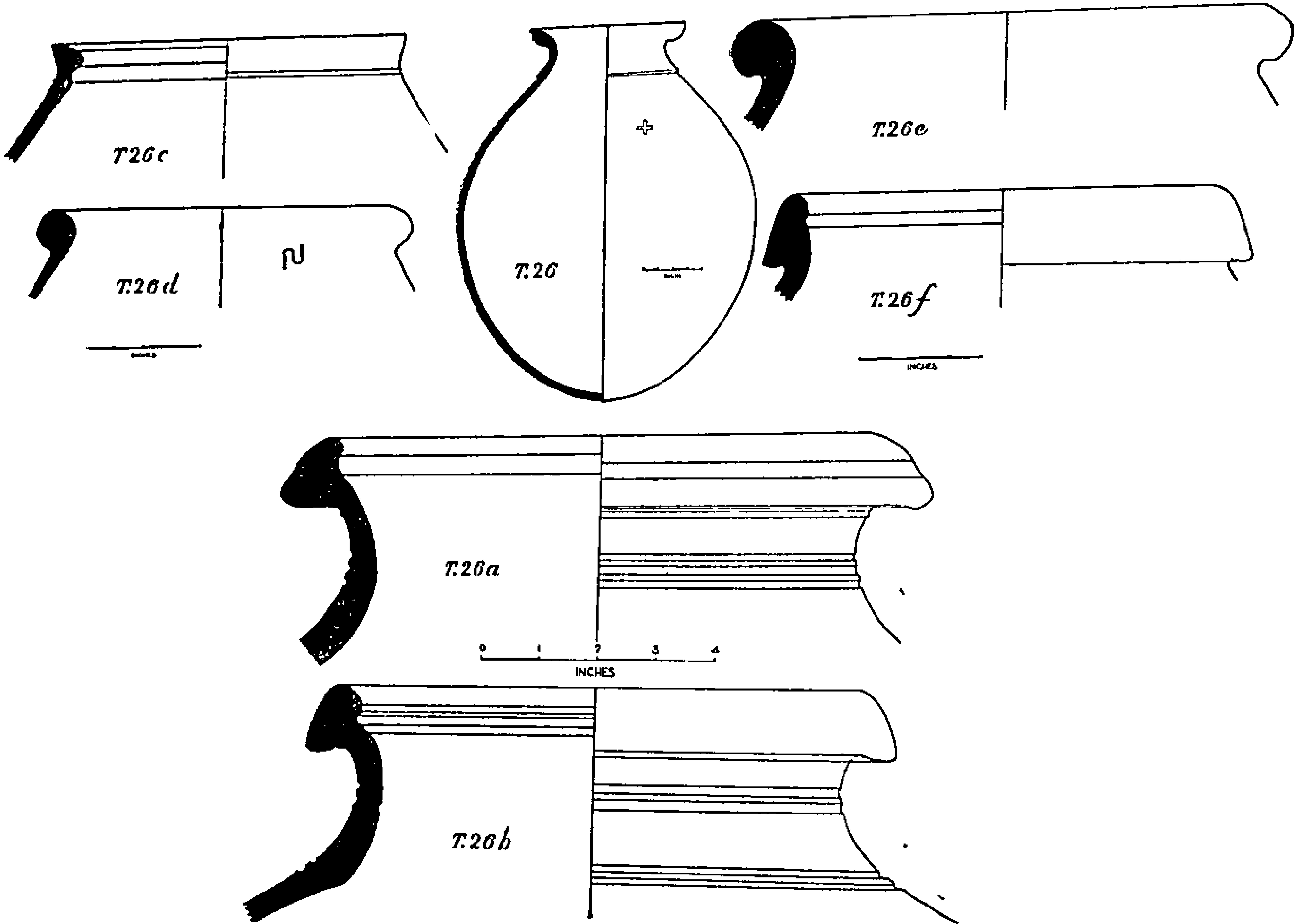


Fig 21 Type 26 Red ware (Storage Jars) Layer 5, Period II (A)
(See p 60)

18d Fragment, dish or lid, with thick rim band, and a broad shallow groove below the rim No 2212, MG N B(5)

18e Fragment, dish or lid, with a series of shallow grooves and bands below the thick rim, sharpened at the edge No 2185, MG N E(5)

18f Fragment, dish or lid, with a well cut rim and grooves below the edge No 6585, MG N E(5)

Fig. 19. (19, 19a-19f)

Type 19

19 Fragment of a very large lid or dish, slightly incurved rim, thickened at edge *and a broad groove outside at the junction of the rim and curvature of the base* Thick, coarse, brown fabric with red wash No 2342, MG N D(5)

19a Similar to the preceding, but the rim band bulging in the middle, and thinner at the top, groove narrower as before No 2303, MG N D(5)

19b Fragment, dish or lid, with slightly incurved rim band of uniform thickness, and prominent angularity at the junction of the rim and curvature of the base No 2347, MG N D(5)

19c Fragment, similar to the preceding, but the rim band slightly thickened at the junction, and projecting No 2481, MG N E(5)

19d Similar to the preceding, but the band markedly projected, making it a "cut rim" because of increased thickness No 224, MG N B(5)

19e Similar to the preceding but the rim *has a concave cut No 2206, MG N* B(5)

19f Similar to No 2481, but larger and narrower band No 2352, MG N D(5)

Type 20 Dish (Illustrated with Type 37, Fig. 26)

This type is distinguished from the previous ones by the thinness of its fabric, as well as by its form, which is definitely that of a dish Very few—only two—sherds of this type have been found

20 Fragment of a dish, with a high slightly inturned side Fine, thin fabric with well levigated clay covered with a thin red slip and burnished smooth No 2322 MG N (5)

Fig 20 (21-25a)

Types 21-25 Lids

21 Half of a large lid probably with a moderately high roof, coarse brown fabric No 6506, MG N E(5) From the well *Three smaller ones Nos 6746, 6739, 6750 of similar type 21a—21c not illustrated*

22 Fragment of a large lid high roof, very coarse greyish brown fabric No 6506a, MG N E(5)

23 Fragment of a lid having probably very high roof, with almost straight sides, and small inner ring fabric coarse but smoothed by burnishing No 2611, MG N C(5)

Two more fragments Nos 4630, 6736 of similar types 23a 23b not illustrated

23 Fragment, lid, with a low (?) roof and a low inner ring No 6744, MG N (5)

23a Fragment, lid with the *inner ring slightly* larger than *in* the preceding one No 6737, MG N A(5)

24 Lid with a low flat domical roof the edge of the inner ring is sharp and has a well made groove so that it is certain that the ring went into the rim of the vessel if covered No 6461, MG N F(5) From the well

25 Lid with a fairly high domical roof having a series of grooves on the outside as well as inside It has no inner ring No 6513 M G N E(5) From the well

25a Fragment of a lid similar to T 25 but it has an internally beaded rim No 6741 MG N C(5)

Fig 21 (26, 26a-26f)

Type 26 Large Vessels (Storage Jars)

Remains of a number of large vessels were found *in situ* in this layer One has been partially reconstructed, while there are others of which only rim fragments survive From these it is not possible to have a full idea of the shapes Exceptionally thick and heavy rims suggest how large and spacious the vessels must have been

26 Large storage jar with a rounded base short neck and out turned rim Thick coarse burnished red fabric with a black spot at the base The rounded base indicates that the vessel must have been kept in a hollow permanent fixed stand Incised cross on the shoulder No 4330a MG N (?) Drawn 1/4 the original [pl XIII 4]

26a Fragment rim with neck having three shallow grooves Red slip over rim and neck outside and only on the inside of the rim Very coarse fabric with lime nodules No 4363 MG N B(5)

26b Fragment rim with neck Grooves round the neck and shoulder Dull brown coarse fabric with lime encrustation on the neck No 4330 MG N B(5)

26c Fragment of rim The vessel has no neck but has a flat topped edge Very gritty, coarse red fabric No 4351 MG N B(5)

26d Fragment of rim externally beaded Very coarse burnished red fabric No 4351a MG N F(5)

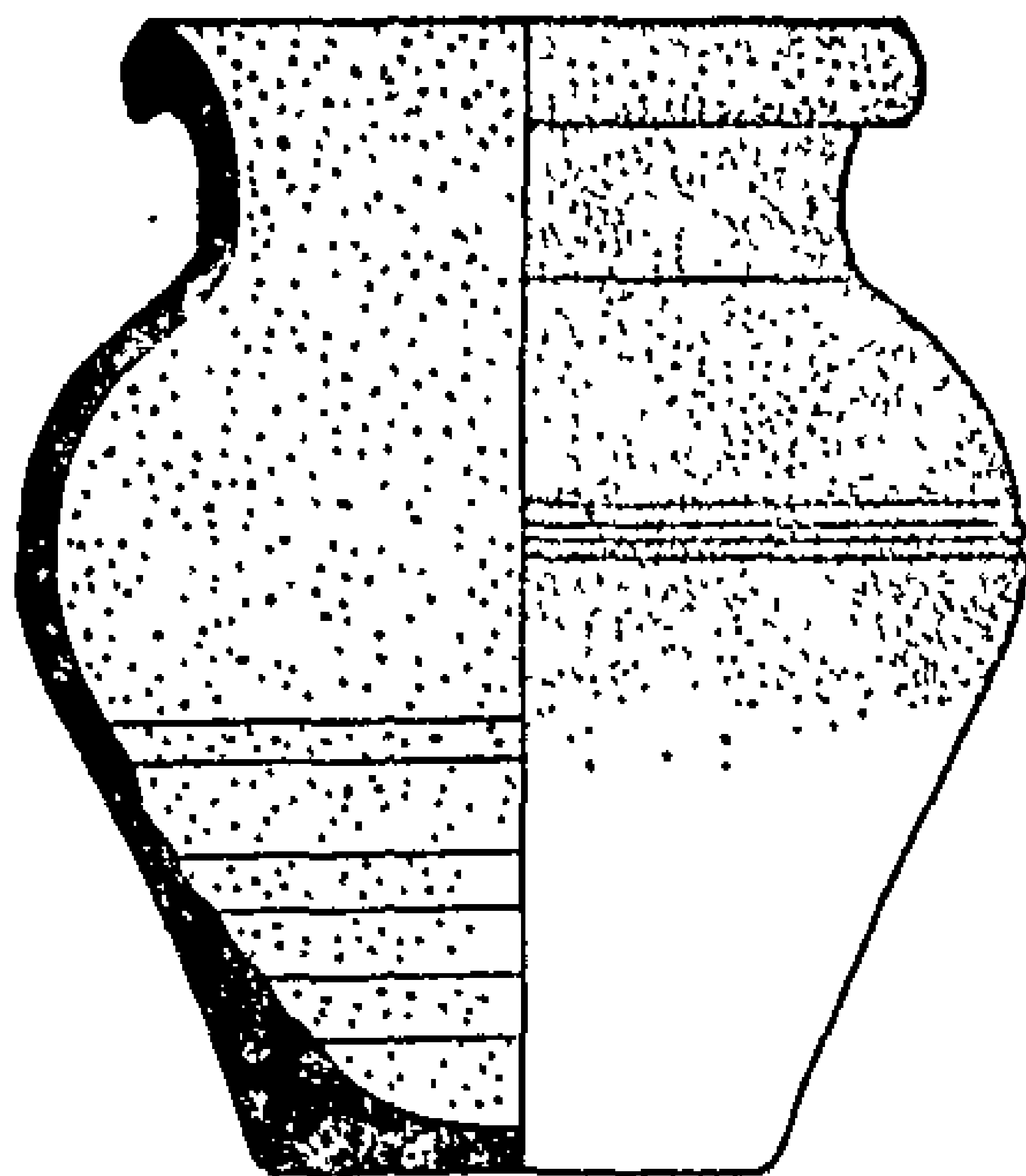
The one illustrated from Layer 4 like No 694 has a Brāhmi *la* like incised letter on its shoulder It may represent the Brahmi numeral 8 A sherd No 5067 of similar type with identical symbol or letter occurs in MG E N Ie(3) However, if read vertically according to the natural shape of the vessel it looks like S

26e Fragment of a rim with very thick external beading Coarse fabric, but having a fine red wash No 4351 MG N E(5)

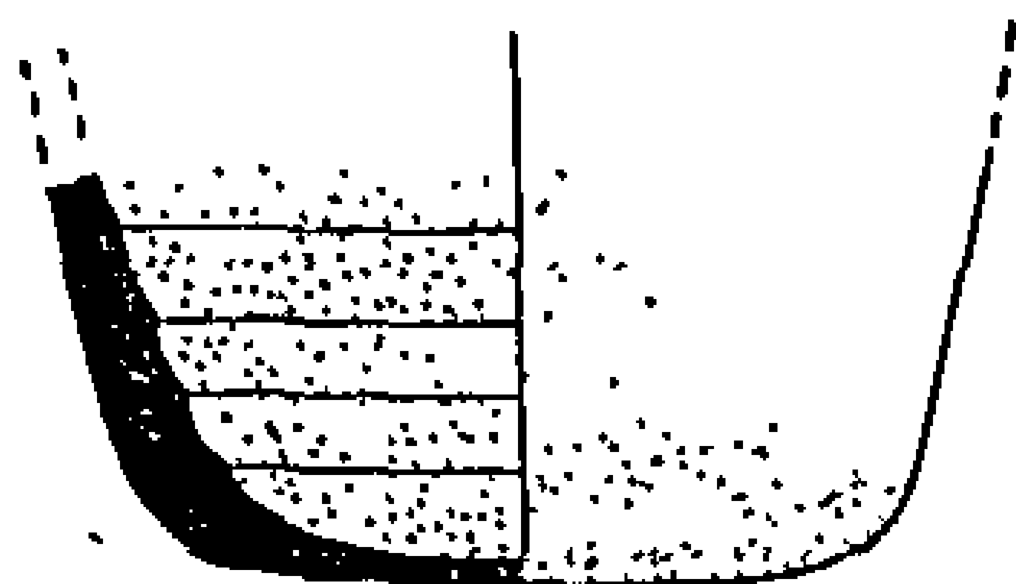
26f Fragment of a rim with a very broad undercut rim Coarse fabric but possibly having a red wash No 4287 MG N B(5)

Black-and Red Ware

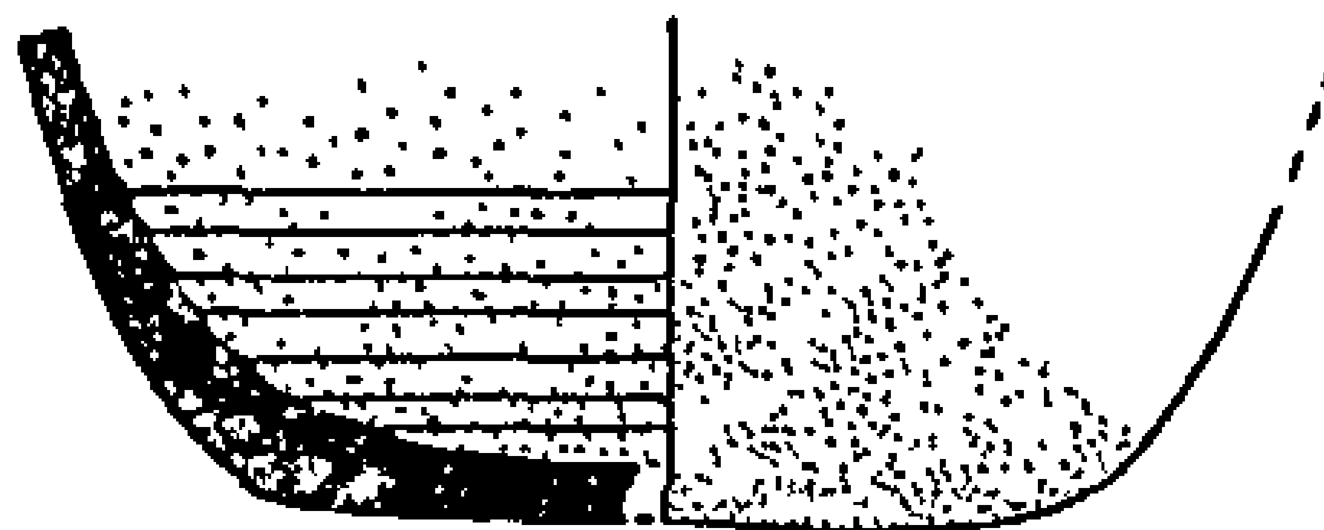
The Black and Red ware is, as said above, comparatively smaller in quantity As regards quality, all the types are not uniformly of the same fabric, either in thickness of the ware, or polish or colour Three kinds may be distinguished—(*a*) Ordinary, (*b*) Fine, (*c*) Very fine These gradations in quality are not confined to one type, but are generally to be found in all the types of this ware



T.27 b′



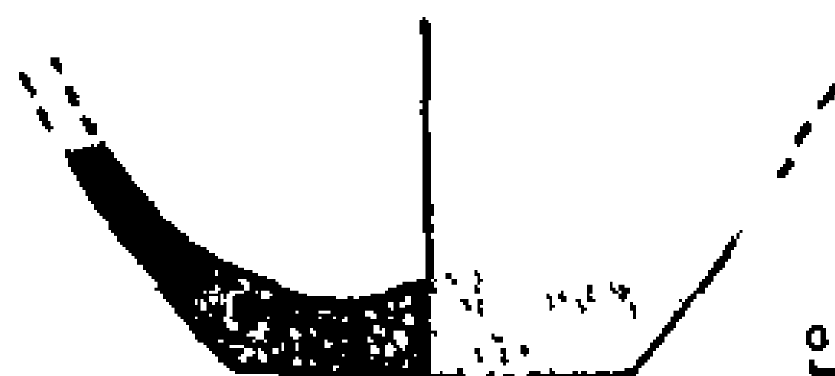
T.27



T.27 a



T.27b



T.28





T.28a



T.28b

Fig 22 Type 27–28. Black-and-Red Ware Layer 5, Period II (A)

(*See p. 61*)

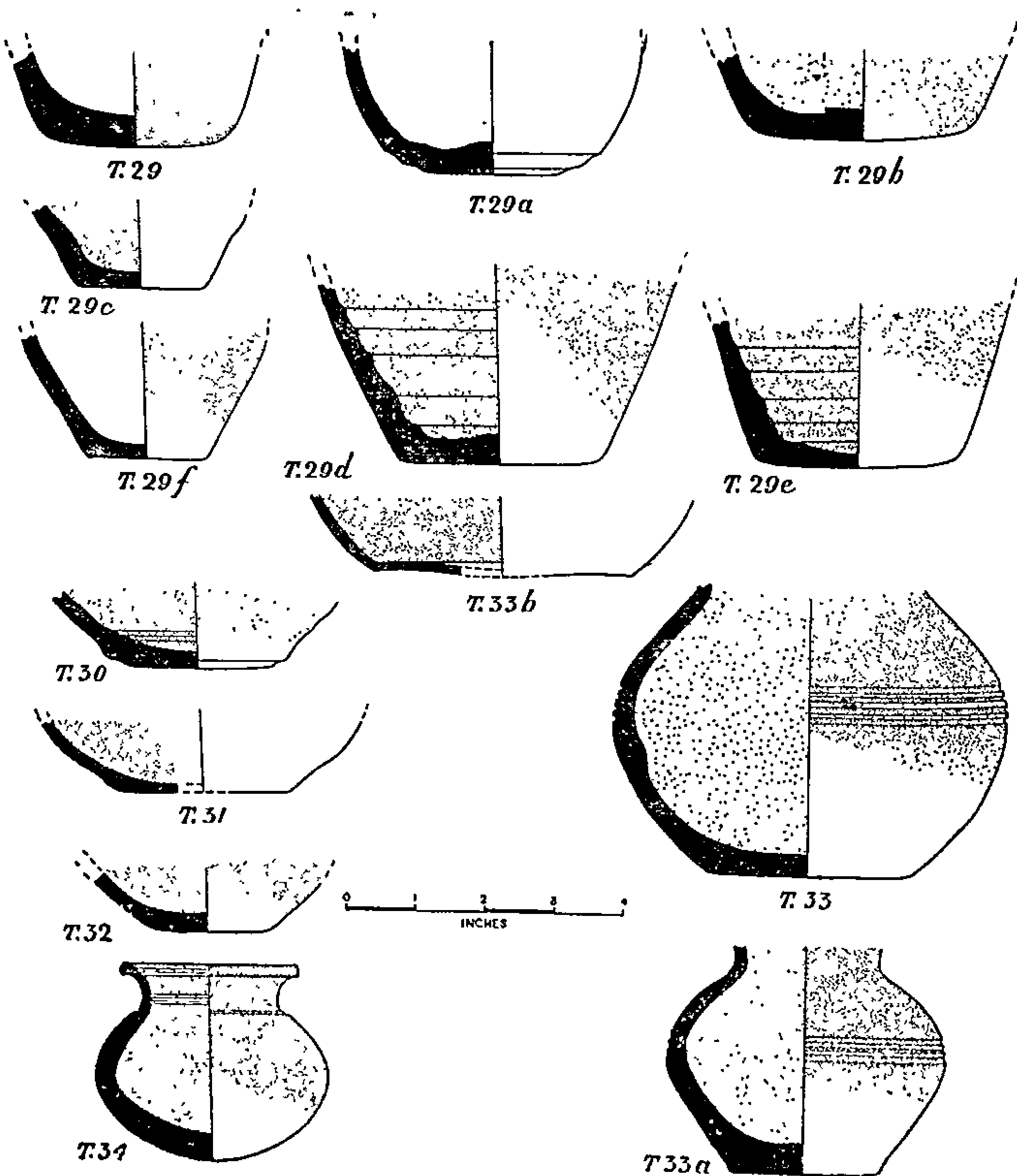
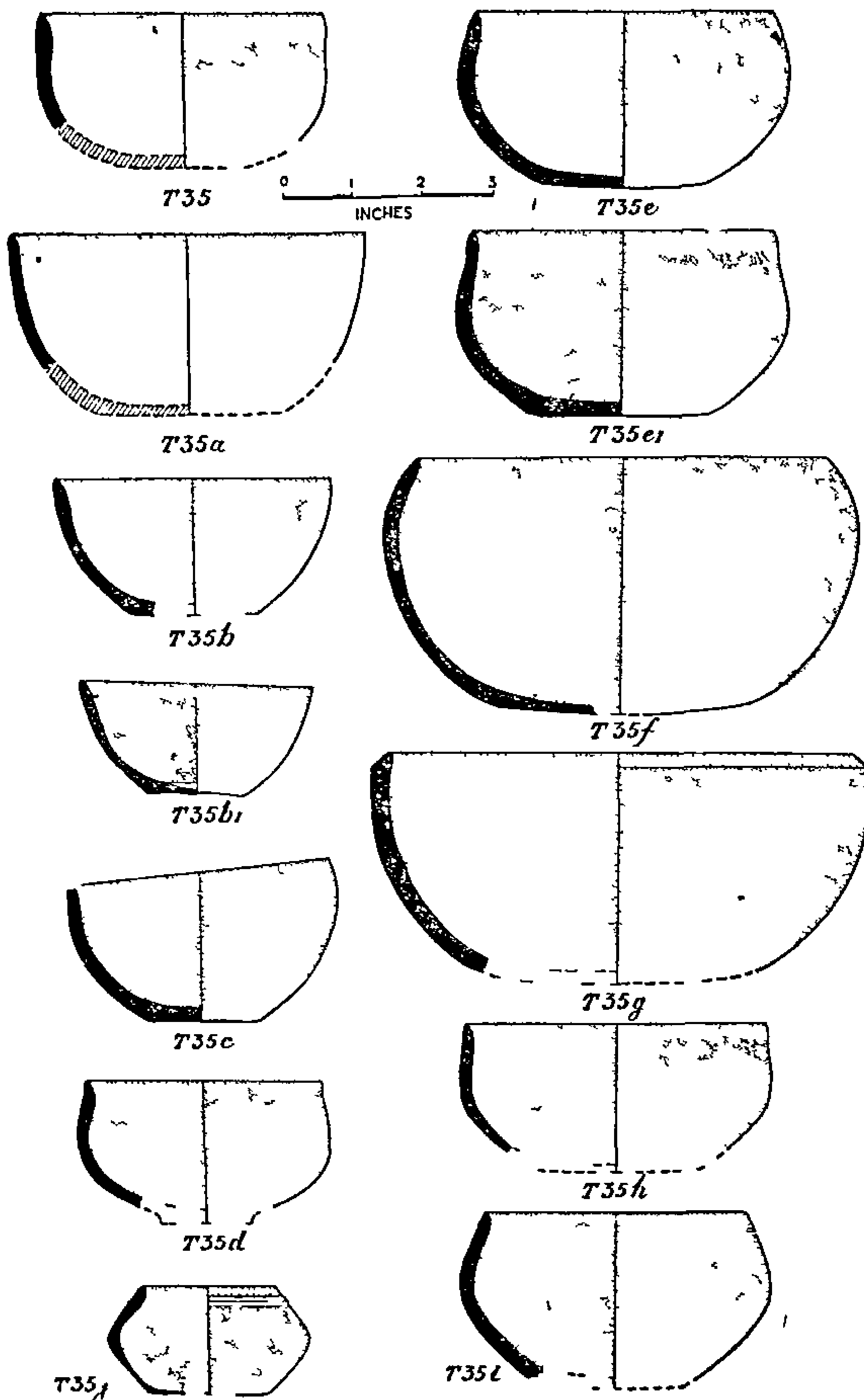


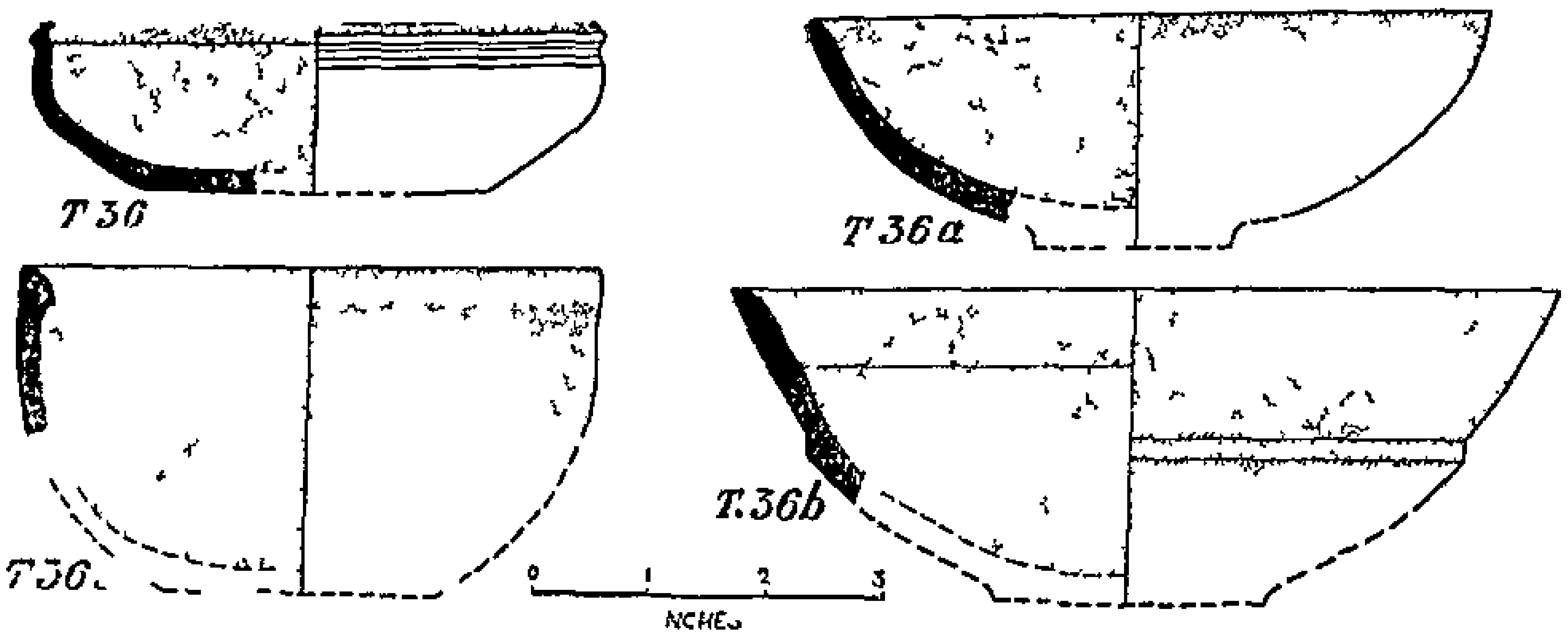
Fig 23 Types 29—34 Black-and-Red Ware Layer 5, Period II (A)

(See pp. 61-62)



Fg 24 Type 35 Black and-Red Wa e (Bowls) Layer 5 Per od II (A)

(See pp 6° 63)



Fg 25 Type 36 Black and Red Ware (Bowls) Layer 5 Pe od II (A)

(See p 6ـ)

The Black-and-Red ware exhibits the process of inverted firing, so that the tops are black or blackish, while the bases are brownish or red. These colour-effects are further heightened by the application of some kind of slip before firing, and polishing or burnishing later. The ware is closely analogous to the Megalithic ware, and either it is derived from the latter, or the latter from it, or both from a third souce.

From this layer, only sherds were found, but from layer 4 an almost complete vessel (No. 5202), which is very nearly identical with this type, was recovered. This represents a small storage jar (*Baraṇī*) or a drinking vessel, (*Tāmbyā* or *Loṭā*). [pl. XV, 10].

Fig. 22. (27, 27a-27b; 28, 28a-28b).

Type 27

27 Fragment, base and side, smooth brownish red outside, with traces of thin red slip, black inside, with well marked corrugations, base flat, rounded at corners No 4558, MG N E(5)

27a Almost similar to 4558, but with narrower corrugations No 4571, MG N E(5)

27b Complete lower half of a similar vessel, but dull red inside. No 5446, MG.N. E(5) From the well.

Type 28

These vessels differ from Type 27 in having thick base and thinner side.

28 Fragment, base and side Very narrow angular base No 4565, MG N. F(5)

28a Fragment, base and side, brownish outside, blackish inside, broad base rounded at corners No 4537, MG N E(5)

28b Fragment, base and side, base rounded and having impression of basket decoration on a black surface, inside smooth red, owing to thin red wash No 4540, MG N D(5)

Fig. 23. (29, 29a-29f; 30-32, 33, 33a-33b; 34).

Type 29

In this type, the base and sides are of equal thickness.

29 Fragment, base and side, both very thick, base rounded and blackish No 4543, MG N B(5)

29a Fragment, base and side, light brown inside, reddish outside, very shallow corrugations, base flat but rounded at corners No 4534, MG N E(5)

29b Fragment, base and side, black inside and outside, base as before. No 4557, MG N F(5)

29c Fragment, base and side, black inside and red outside, side and base of equal thickness, but light and thin No 4587, MG.N D(5).

29d Fragment, base and side, very shallow corrugation inside, no slip, but smoothed outside and inside which is blackish, base flat with angular corners No 4564 MG N E(5)

29e Similar to 4564, but corrugations more marked No 4553, MG N D(5)

29f Similar to 4564, but thinner side and base No 4568, MG N D(5)

Type 30 Globular vessel with Thick Base and Thinner Side

30 Fragment base and side, base thick and having a ring like projection but with an uneven surface No 4535, MG N C(5)

Type 31

31 Fragment base and side of a globular vessel with narrow projecting base Thin fine fabric, brown outside, black inside No 4552, MG N E(5)

Type 32

32 Fragment base and side of a globular vessel flat narrow base Fine fabric though thick black inside with a coating of black slip bright red outside No 4573, MG N E(5) *Three other fragments (Nos 4582, 4575, 4581* all from MG N C A D (5) respectively) *are not illustrated*

Type 33

33 Globular vessel probably with a short neck and everted rim It has a flat base and three shallow grooves round the belly below which the surface is reddish No 353 MG N B(5) [pl XV, 12]

33a Globular vessel similar to 353 but much smaller with body tapering towards the base Three grooves round the belly and traces of short neck with perhaps everted rim No 353a MG N F(5) [pl XV, 11]

33b Fragment base and side Glossy black inside and outside fine smooth red both a result of the application of some slip No 892 MG N D(5) Depth 15 ft 2 in

Type 34

34 Globular vessel but smaller than 353a with a fine glossy black and red surface Base rounded Narrow neck with a groove and a thin beaded, everted rim No 5208 MG N B(5) [pl XV, 13]

Fig 24 (35, 35a-35j and pl XV, 8 9)

Type 35 Bowls

Though not many sherds of these vessels were found, a few were recovered almost complete while the few others seem to give a representative series

35 Fragment of a rimless bowl with straight side and slightly rounded at the base Upper half of the outside and the whole of the inside black, burnished over a black coating light brown base, No 5221a MG N (5)

35a Fragment of a similar vessel side very slightly outturned but the fabric finer and thinner, with glossy surfaces outside red almost upto the top No 5221, MG N (5)

35b Fragment, bowl with a narrow flat base and slightly outgoing side Fabric similar to No 5221 No 6352, MG N F(5)

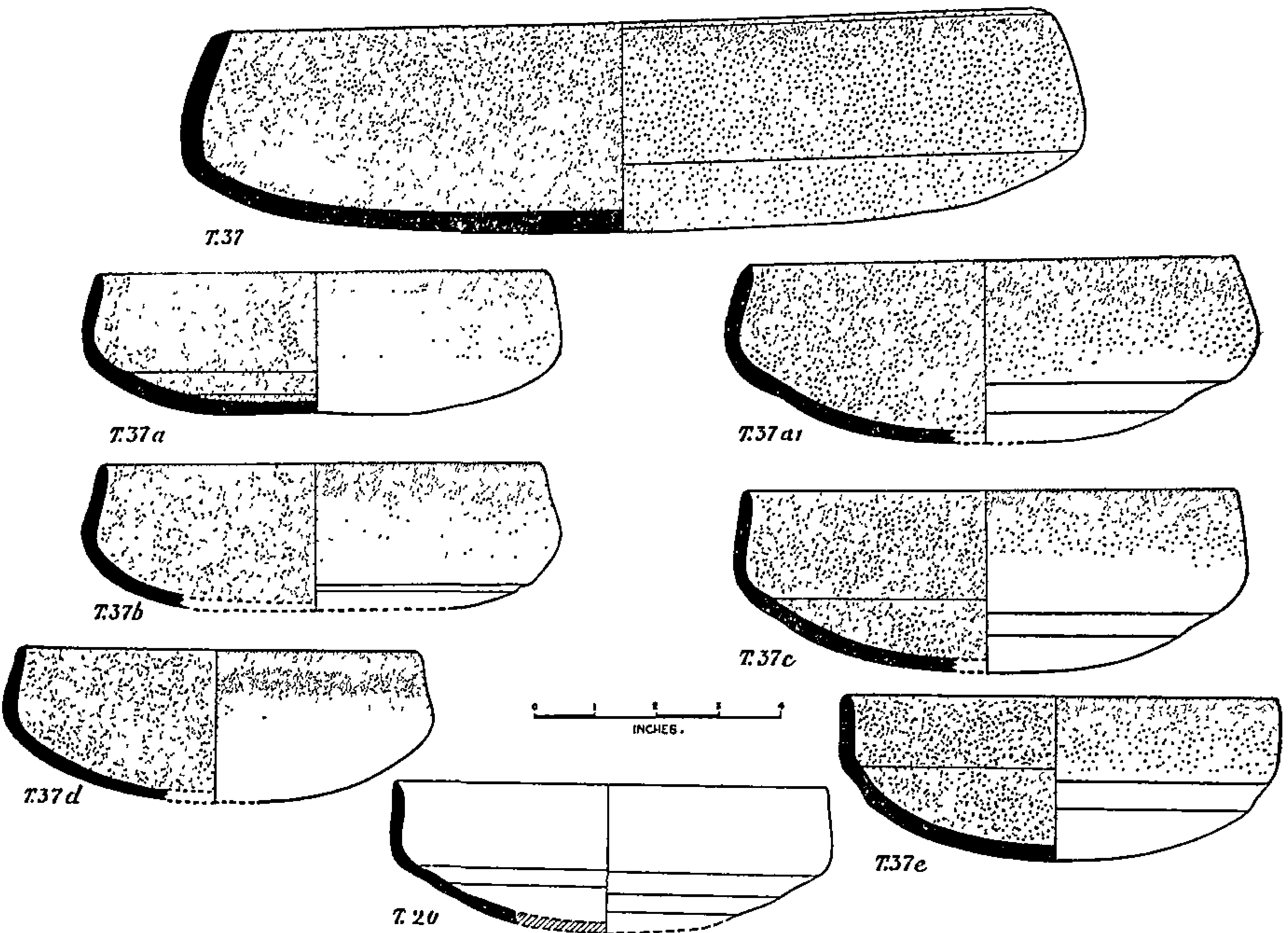


Fig 26. Types 20 and 37 Black-and-Red Ware (Dishes). Layer 5, Period II(A).

(*See pp. 63-64*)



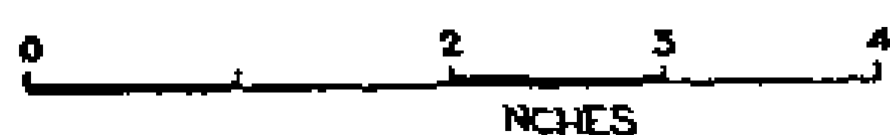
T38

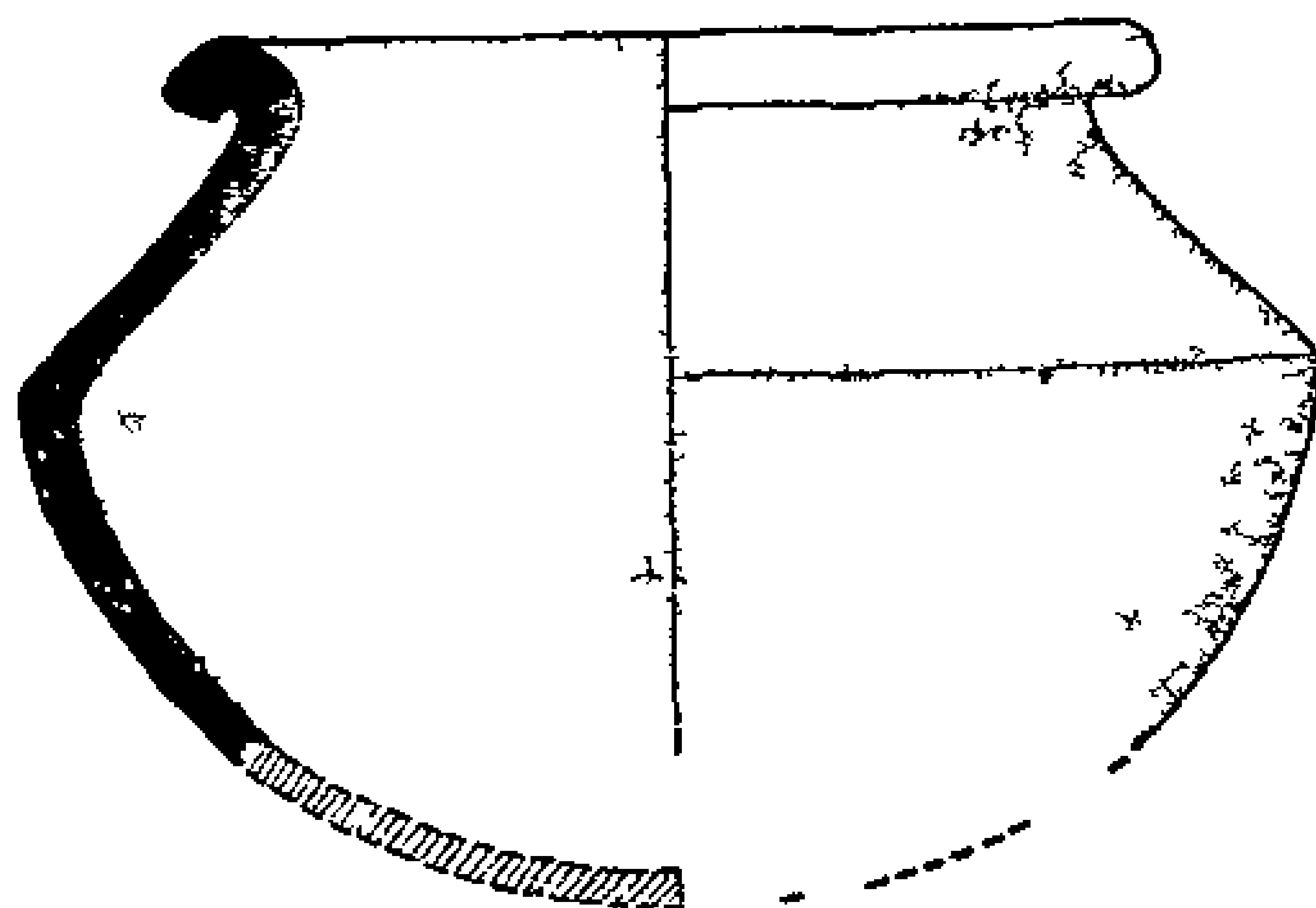


T38a

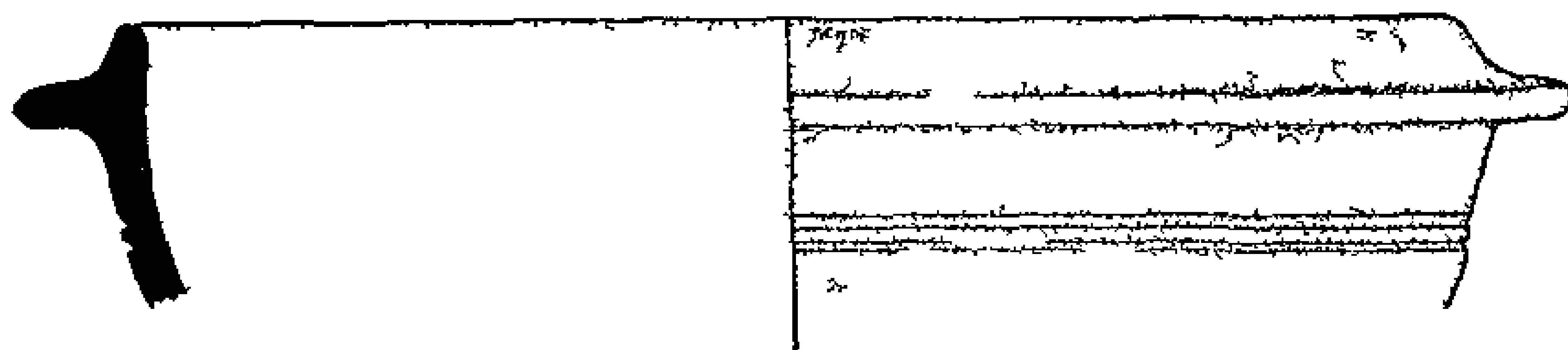


T39

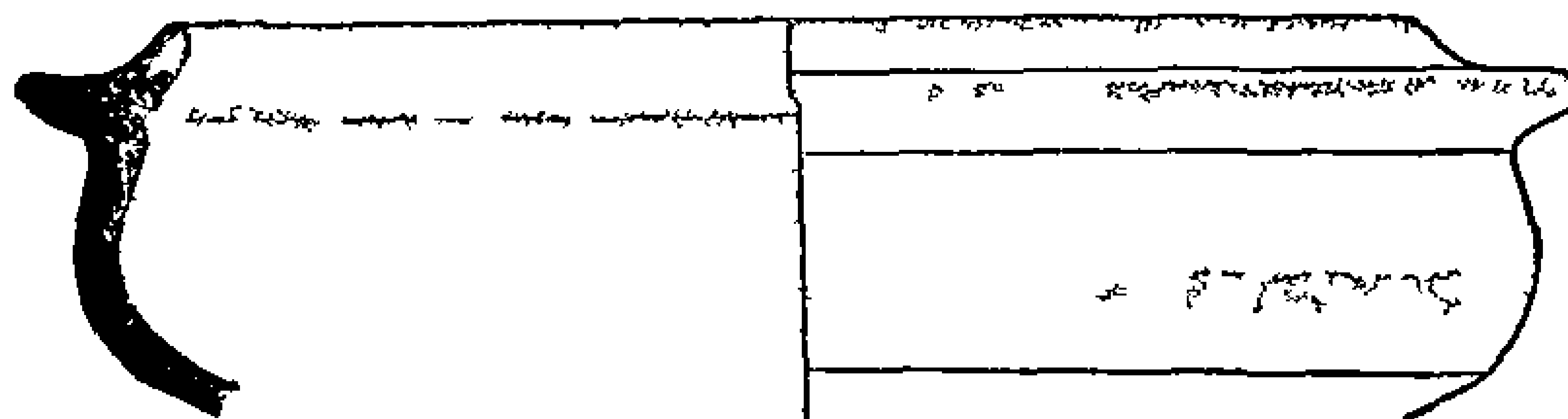




T40



T41'



T41

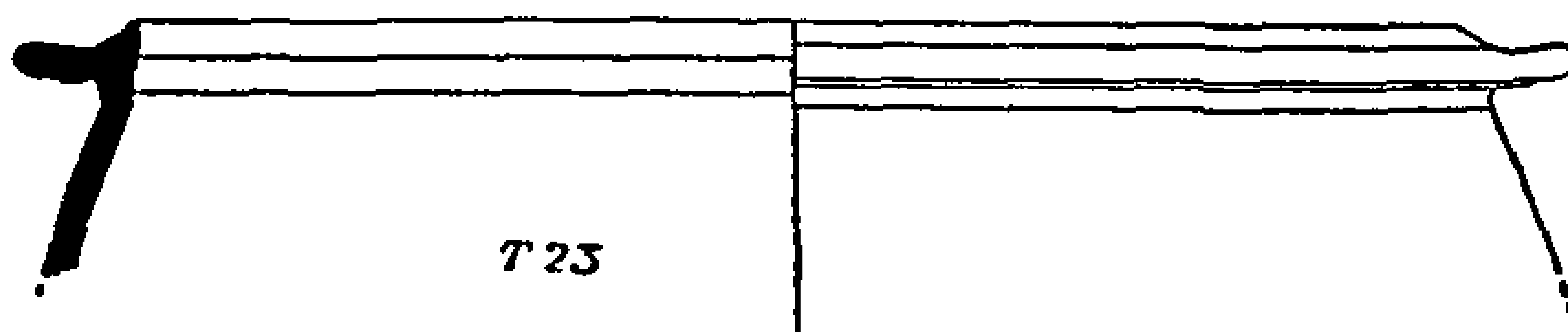


Fig 27 Types 23 38–41 Black, Black-and-Red and Red ware Layer 5 Period II (A)
(See p 64)

35b[1] Fragment, bowl, base gone The lower part on the outside is whitish brown, and not reddish as in the preceding No 6292, MG N E(5) [cf pl XV, 9]

35c Bowl (reconstructed), with slightly inturned sides and flat base Rather coarse fabric, with rough brownish base No 5216, MG N (5) [pl. XV, 6]

35d Fragment, bowl, similar to No 5216, but probably with a projecting base No 6340 MG N D(5)

35e Bowl, reconstructed, with incurved sided and slightly bulging body No 5215, MG N (5) From the well [pl XV, 6]

35e[1]. Almost identical with 35e Reconstructed No 5207, MG N (5) [pl XV, 5]

35f Almost half of a large bowl having bulging body and side turning in, just at the top Very fine fabric, thin light with glossy black surface inside, outside smooth red, below the belly No 5217, MG N E(5) From the well

35g. Fragments (two), almost half a large bowl, similar to 5217 but with a cut or faceted edge Thick but fine fabric, perhaps black inside and outside No 6302, MG N A(5) Cf Similar shape in N B P Fig 6b

35h Fragment, bowl with sides slightly angular near the base The vessel is half black and half red *vertically* and not horizontally No 5222, MG N D(5)

35i. Fragment, bowl but with incurved side and thicker at the base Fine fabric, with polished surfaces No 5219, MG N (5) [pl XV, 8]

35j Fragment, very small bowl, similar to 5219 in shape but having grooves round the edge of the mouth and very thin base No 6388, MG.N A(5)

Fig 25. (36, 36a-36c)

Type 36

36 Bowl which, unlike the preceding, had a rim traces of which remain, and a very broad, flat base, with a low body Fine fabric, black inside and red outside, excepting at the rim No 6339, MG N F(5)

36a Bowl, rimless, but with a broad low body and perhaps having a projecting base Comparatively coarser fabric, without polish only slightly brown at the base No 6328, MG N E(5)

36b Bowl, rimless but with flaring sides and a ledge half way down the body, and perhaps it had a projecting base Fine fabric, reddish below the ledge No 5224, MG.N (5)

36c Fragment, bowl, with *internally beaded* rim No 6411, MG.N E(5)

Fig 26 (37, 37a-37e and pl. XIV 1-4).

Type 37 Dishes

Comparatively a large number of sherds was found which gives an idea of the types or sizes of dishes in this ware

37 Very large dish (now fully reconstructed) having 13 inches diameter, and 40 5 inches circumference) [pl XV, 1] It has incurved thick sides, with a cut edge Fine polished black surfaces except at the base on the outside which is crimson This as well as the fine black are due to the application of a black slip While taking the moulds for reconstruction it was found that it was irregular in shape as well in make, and was perhaps partly hand made No 5215a, MG N. B(5)

37a Smaller dish similar to above but the edge uncut and not so fine particularly the base which is brownish and perhaps merely burnished No 5210 MG N E(5) [cf pl XV, 2 4]

37b Dish having a slight angular bent with sides sharply turning in with a groove on the base No 6589 MG N

37c Dish almost similar to T 37a but of coarser make with burnished brown and black patches inside and coarse brownish base This suggests how vessels would look like if not coated with a black slip No 5211 MG N A(5)

37d Dish similar to 5210 but with thinner edge The fabric is also thinner and with fine finish Black inside and bright at the base part of which is glossy owing to the application of a slip or polish No 350 MG N A(5)

37e Dish similar to 5210 but perhaps finest of all It has a thin fabric and a very thin sharpened edge Glossy black inside and top of the side outside while the rest is smooth crimson red The cracks in the surface show that this is due to the application of a thick red coating and subsequent firing No 5212 MG N C(5)

Fig 27 (38, 38a, 39, 40, 41', 41)

Type 38 Lids (See also similar types in Tan ware Fig 28)

Only two fragments of lids in this ware have been found From these, the full shape cannot be reconstructed, unless we have recourse to similar ware found elsewhere

38 Fragment lid with a rounded conical nipple like knob Polished black surface coarse unburnished inside No 5089 MG N E(5)

38a Fragment lid with a rounded conical knob Polished black surface coarse burnished inside No 792 MG N E(5)

Type 39 High and Narrow Necked vessel

Only one fragment of this type of vessel has been found

39 Fragment high narrow neck of a vessel with grooves Finely polished surface coarse black inside No 5230 MG N E(5)

ORDINARY BLACK WARE

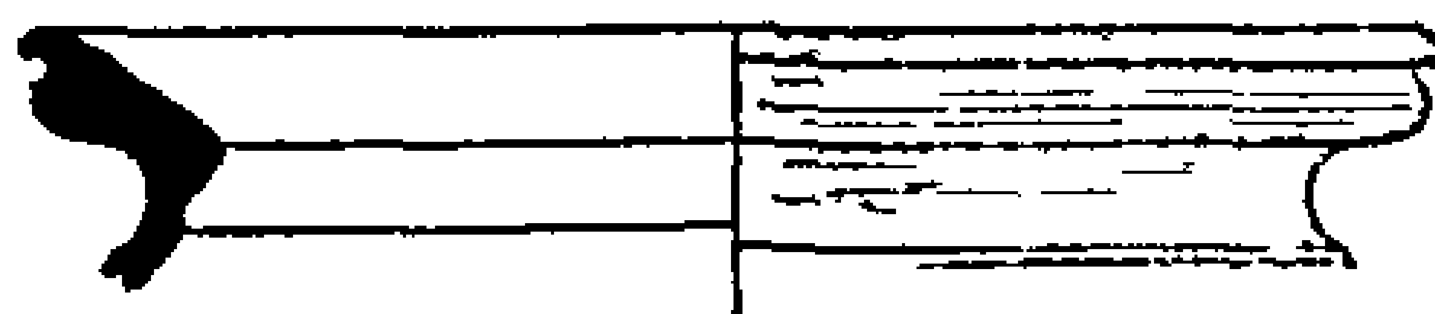
Very few sherds of this ware have been found The fabric is generally coarse, often not uniformly black but having patches of red, and partly burnished

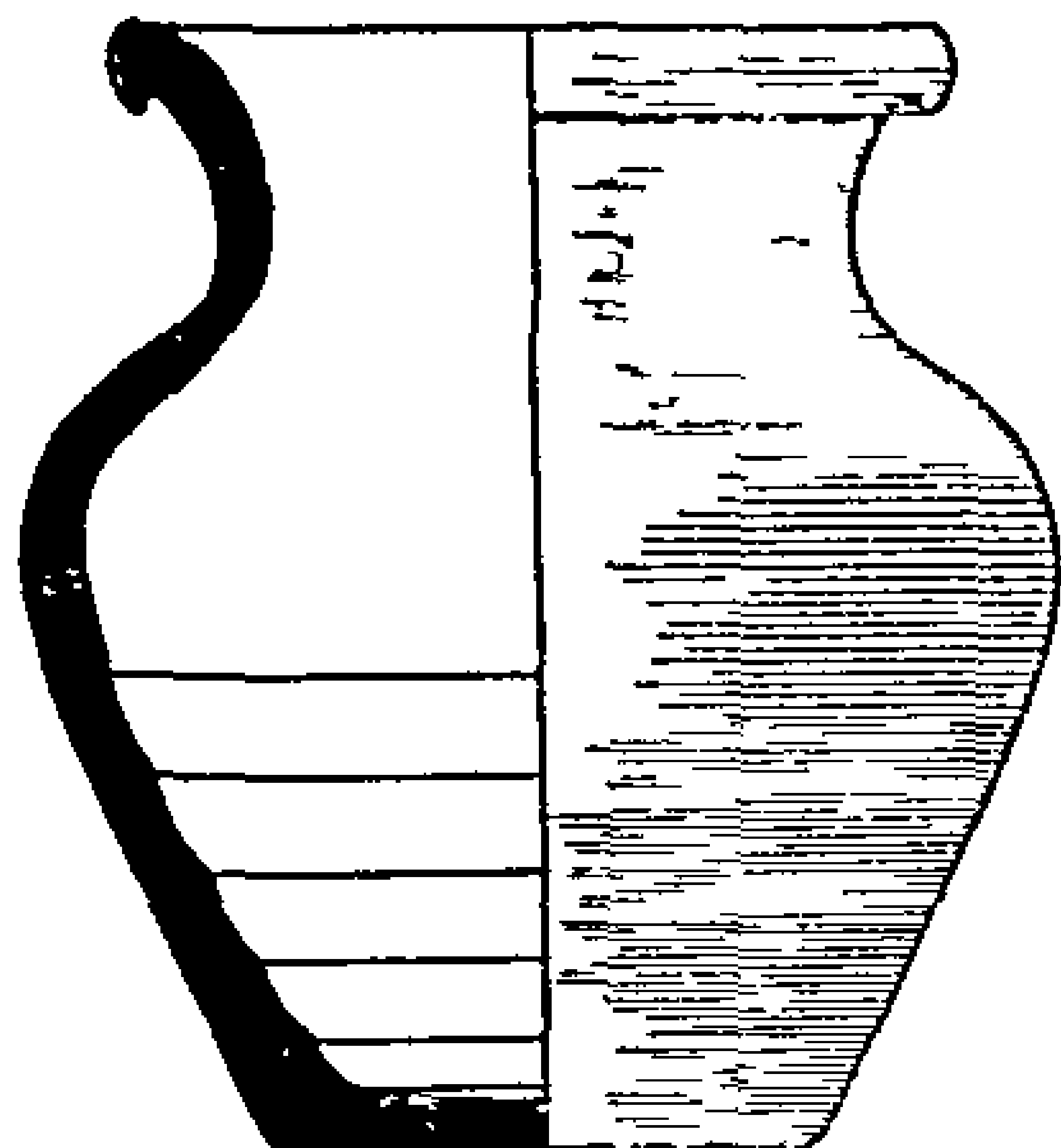
Type 40 Short Necked, Carinated Body

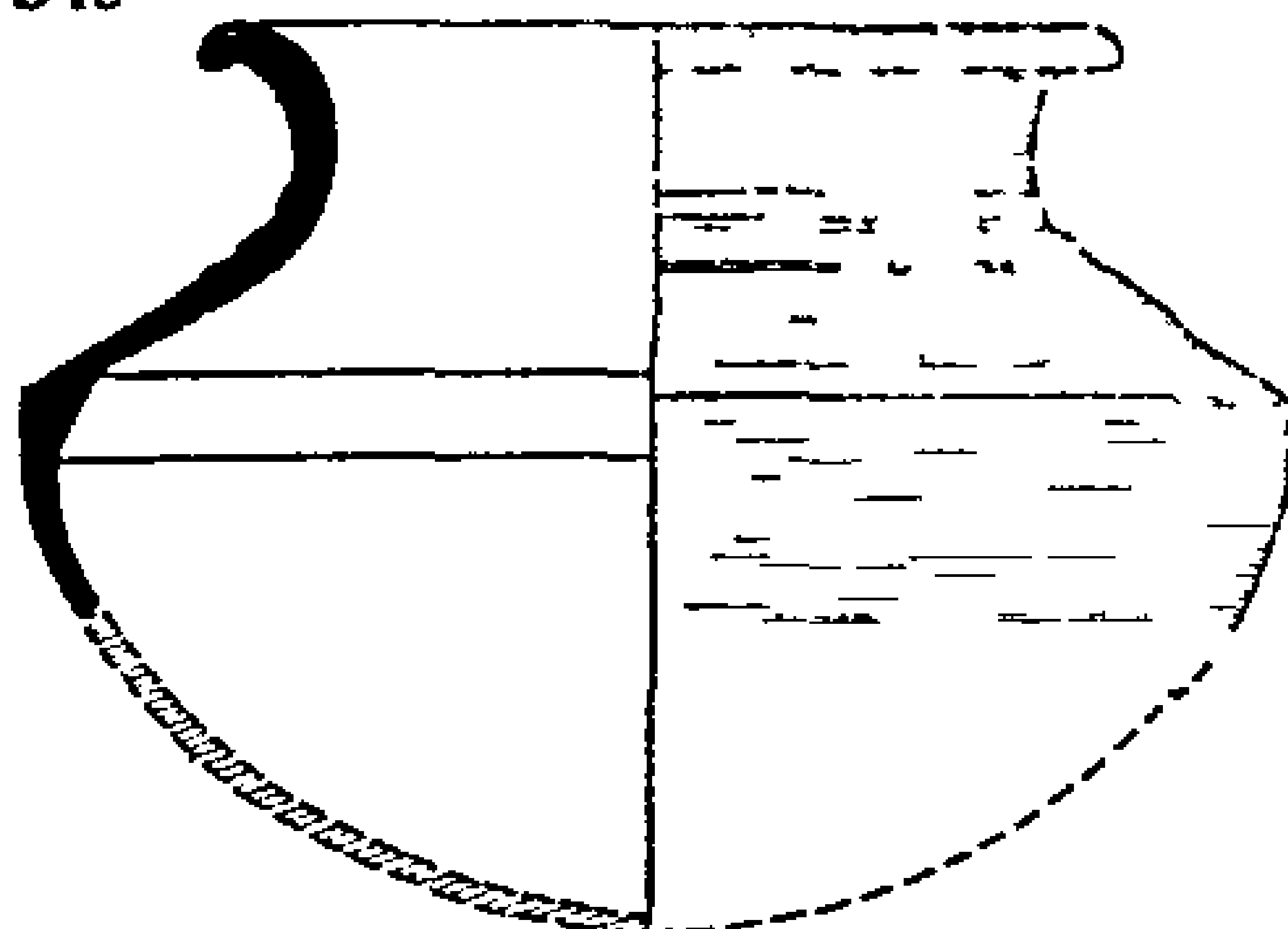
40 The type is nearly similar to T 9 Fig 14 in Red Ware It has short everted rim carinated body The surface above the carinated body is glossy No 5231a MG N D(5)

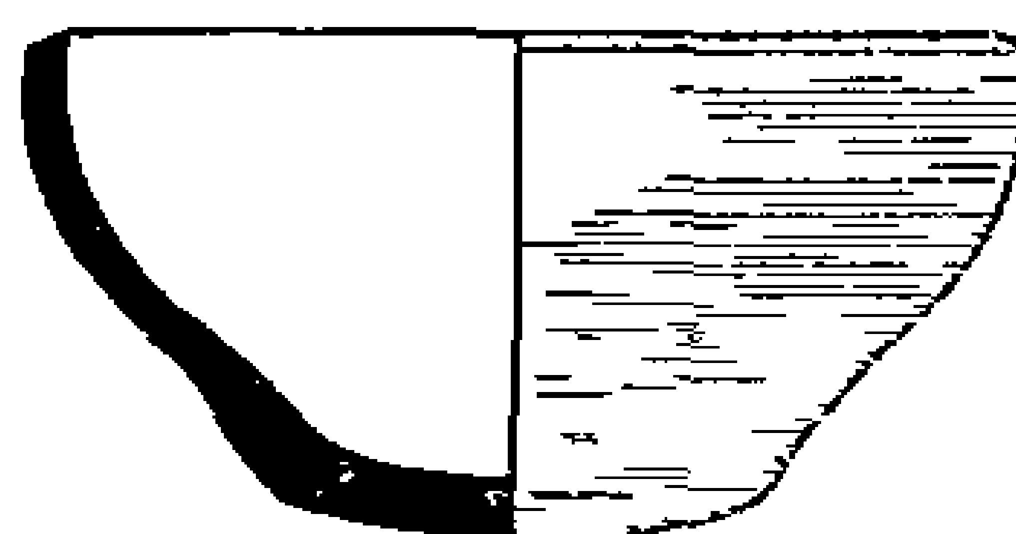
Type 41 Cooking Vessels (Marathi—Handi)

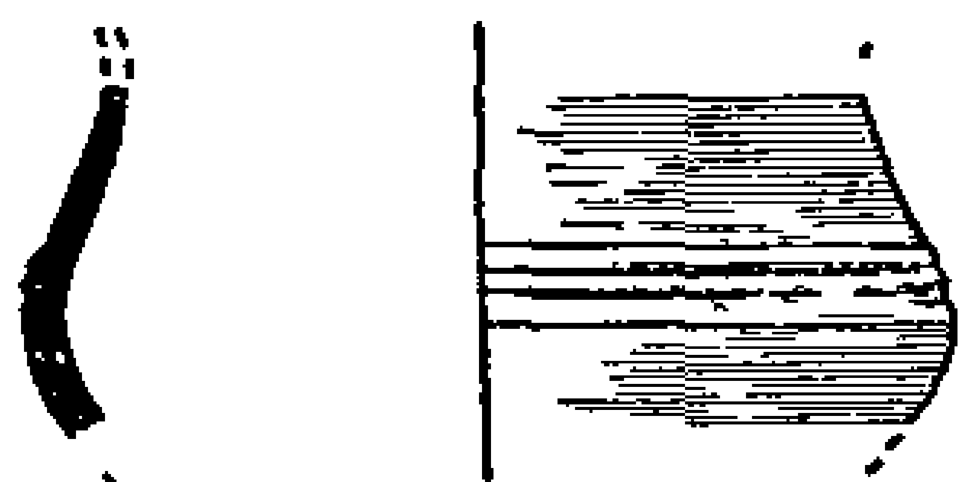
This type of vessel looks like a lid, (Types 21-23, Fig 21) to which it resembles in a number of details But it appears that the vessel was shallow,


T.43"a

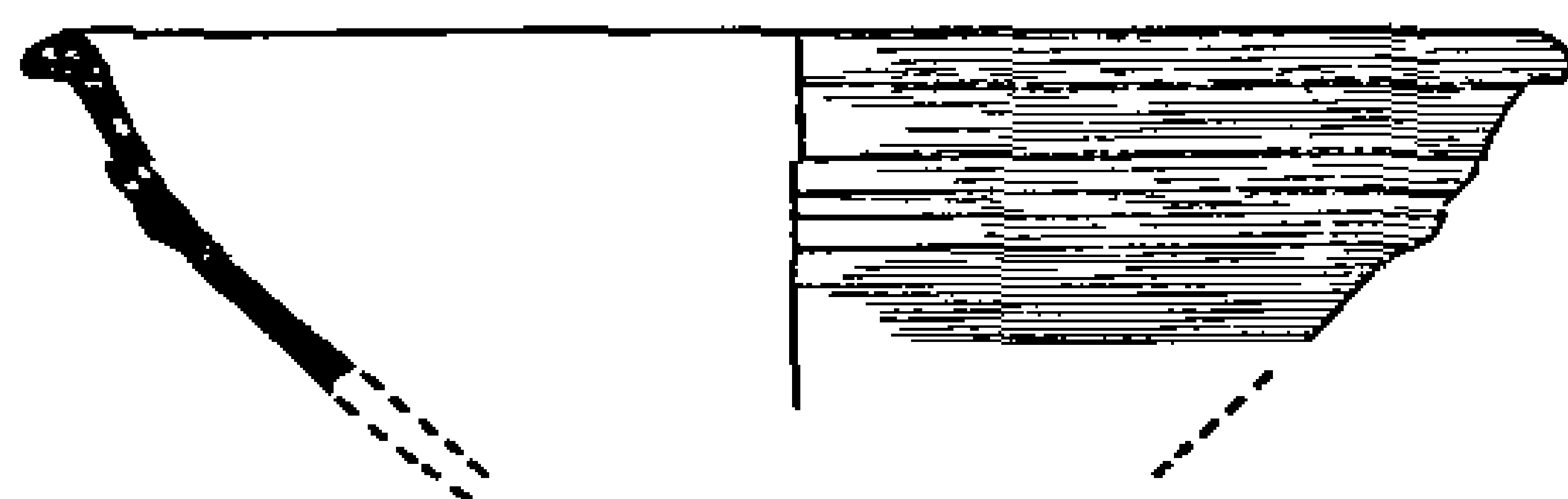

T42

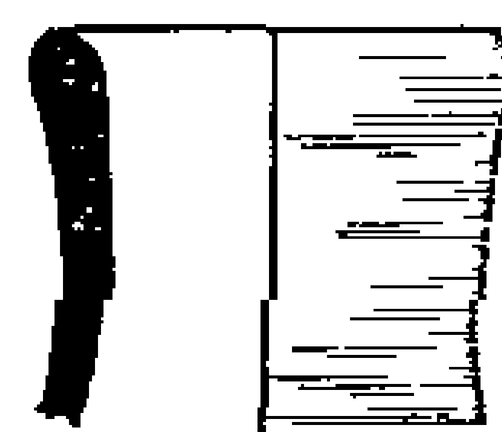

T43

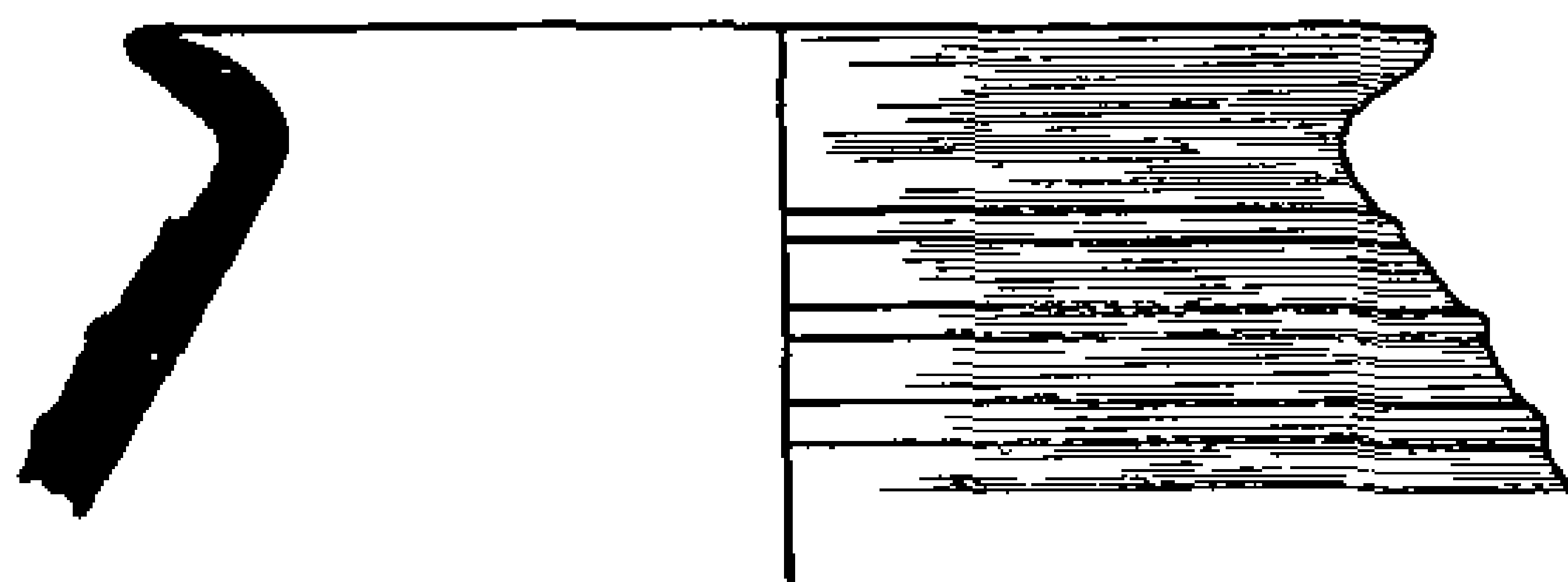

T44

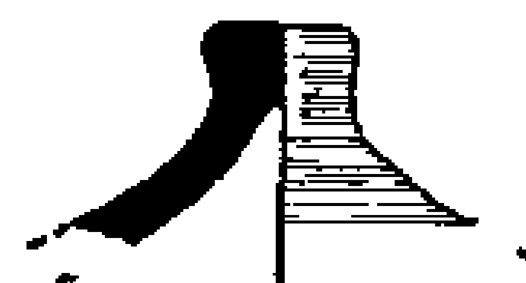

T44a




T45


T47


T46


T48


T48a

Fg 28 Types 42–48 Tan ware Layer 5 and 4 Per od II
(*See pp 65 66*)

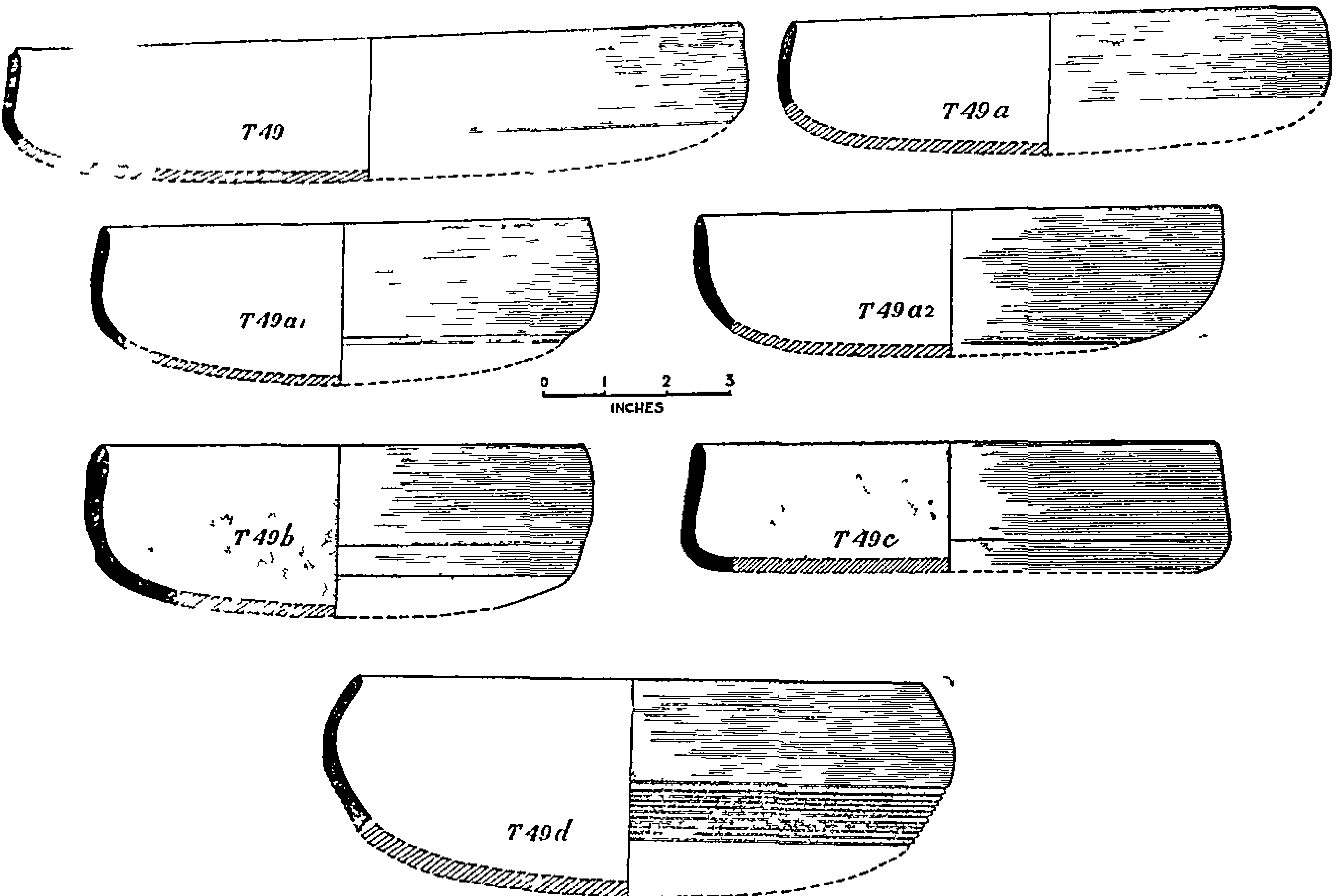
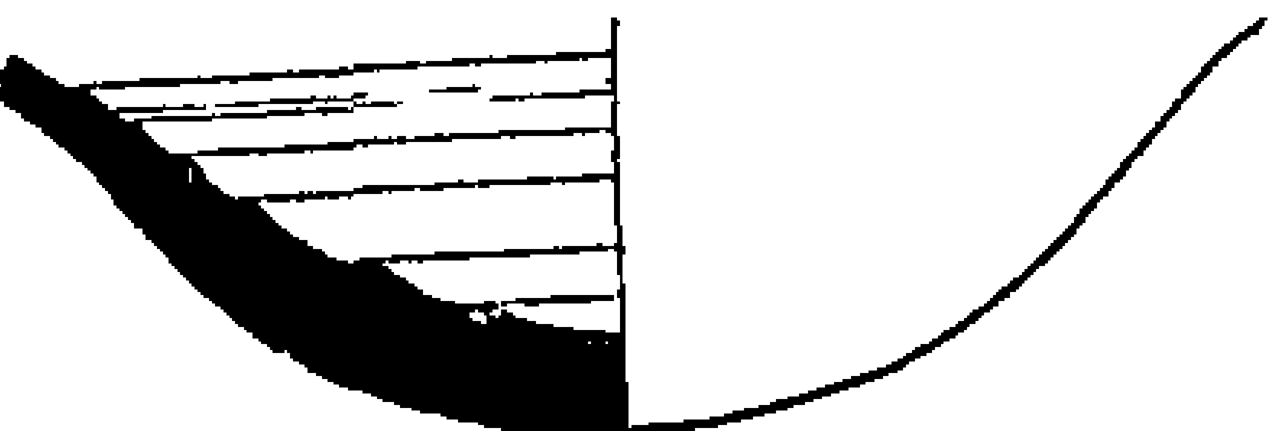
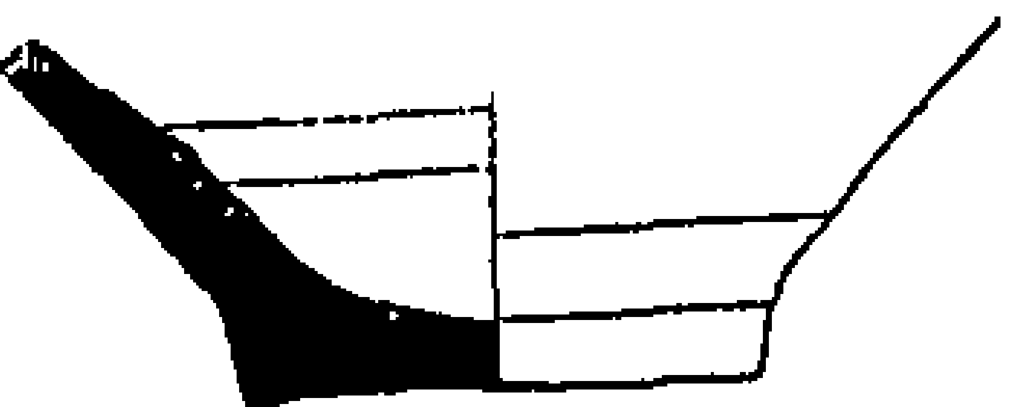


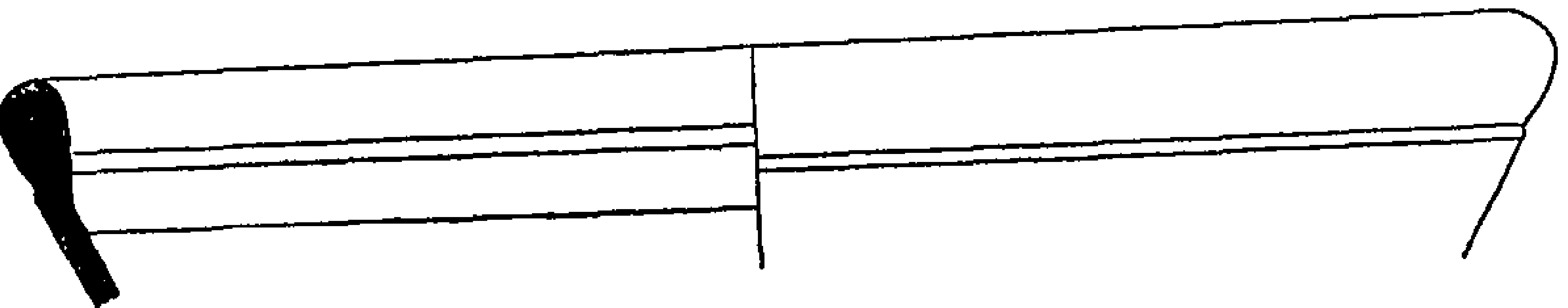
Fig 29 Type 49 Tan ware (Dishes) Layer 5 Period II
(*See p* 66)

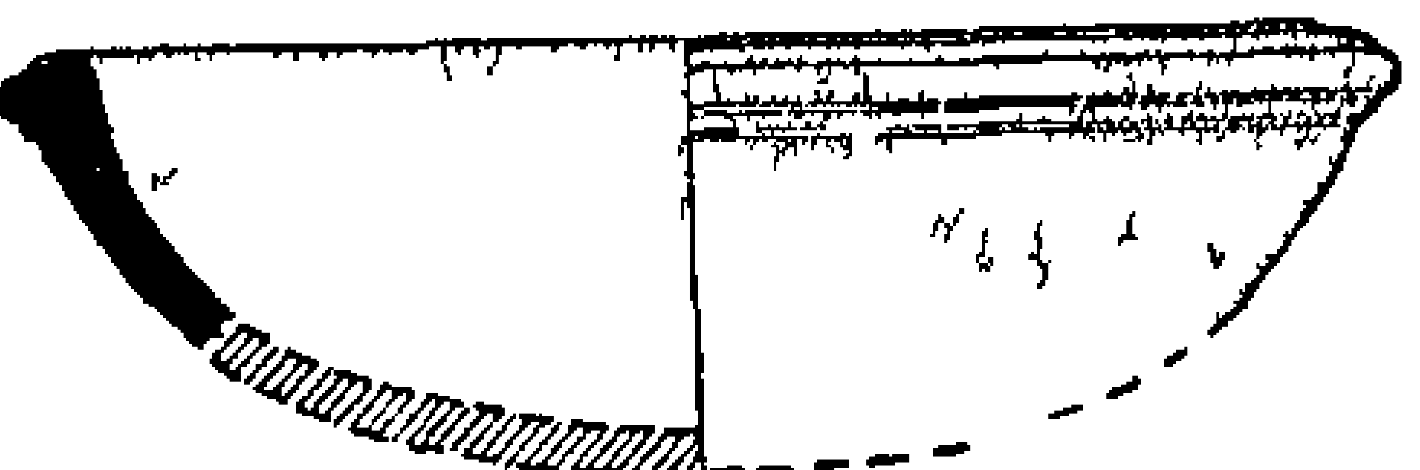


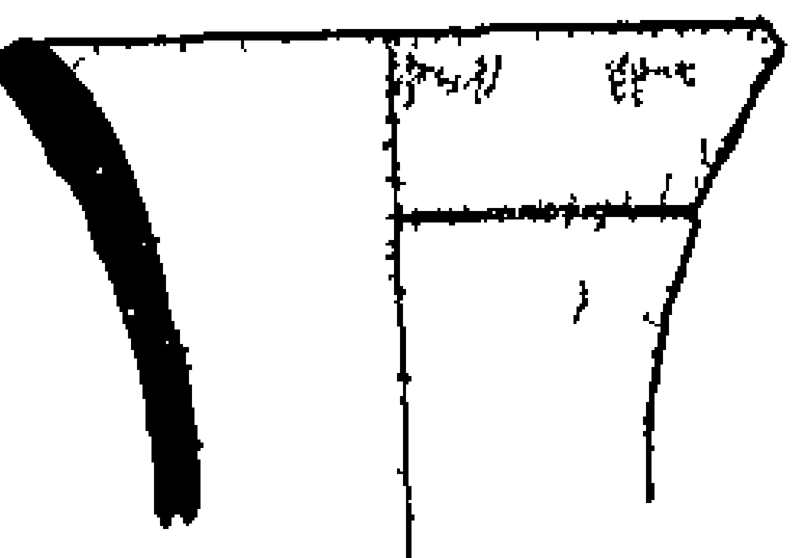












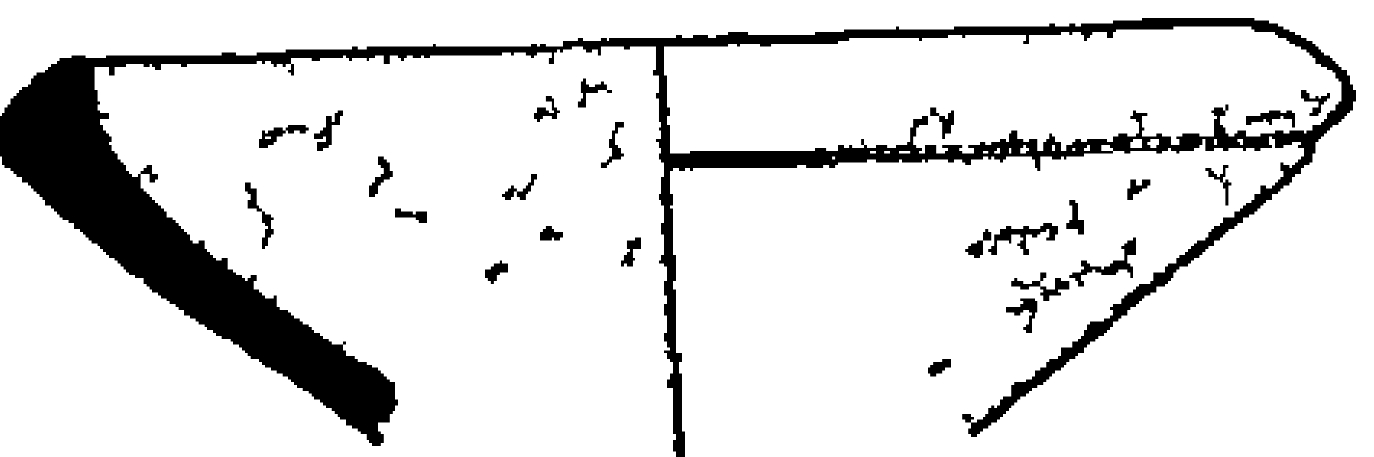


Fig 30 Types 50–56 (New Types) Red Black and Red and Red Wa e Layer 4 Per od II (8)
(*See pp 08 09*)

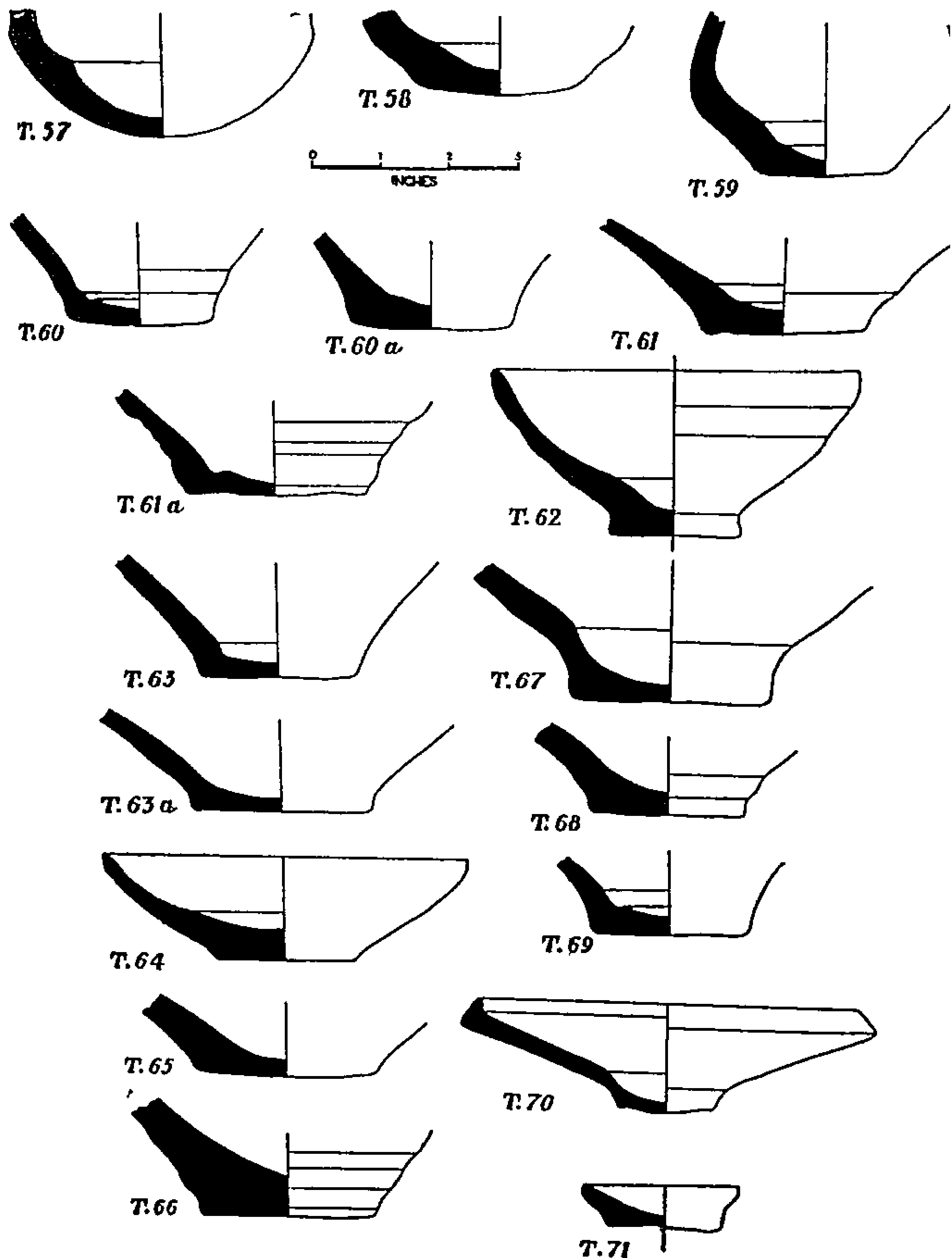


Fig 31 Types 57–71 Red Ware (Bowls) Layer 3, Period IV

(See pp. 72-73)

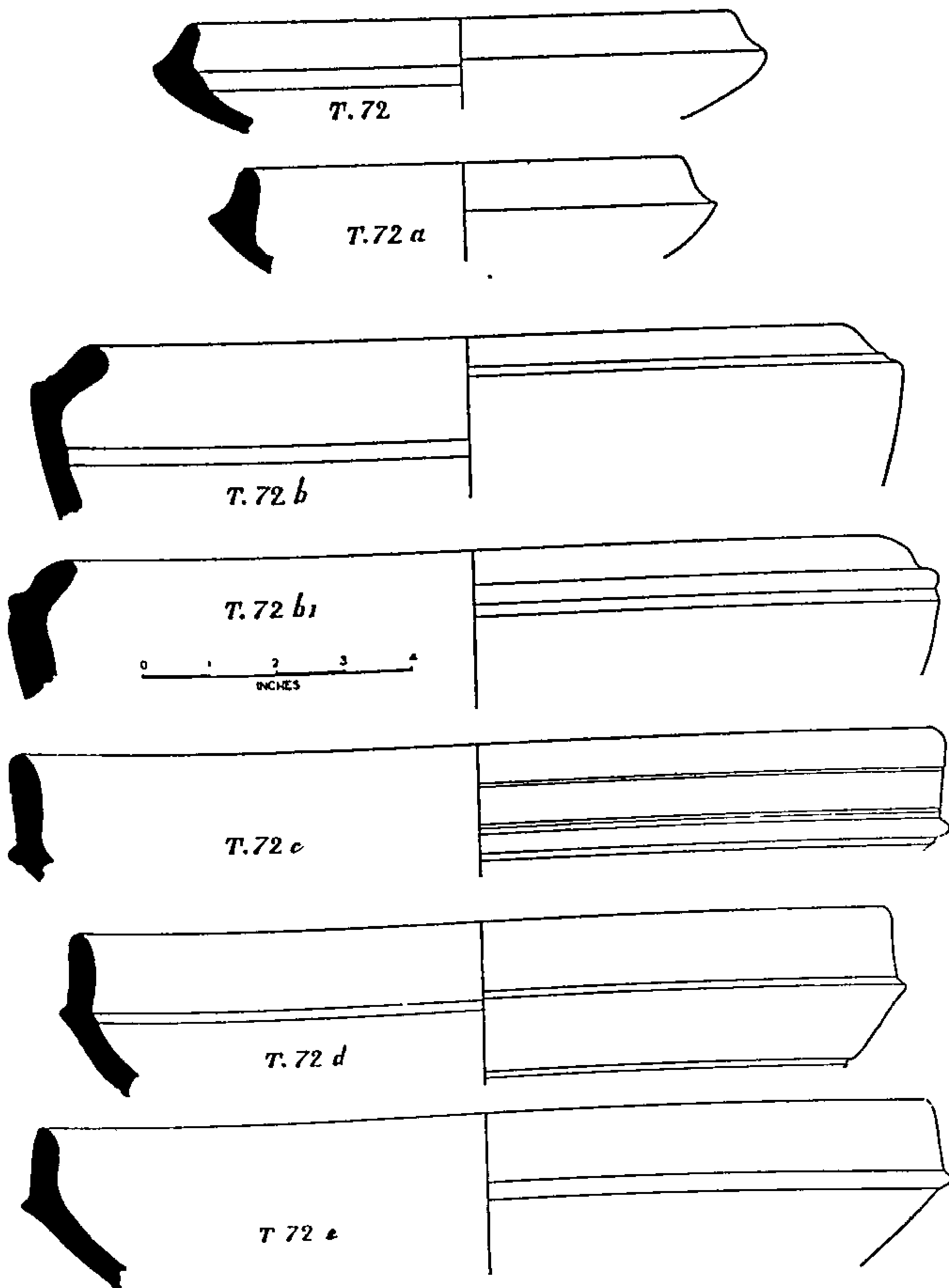
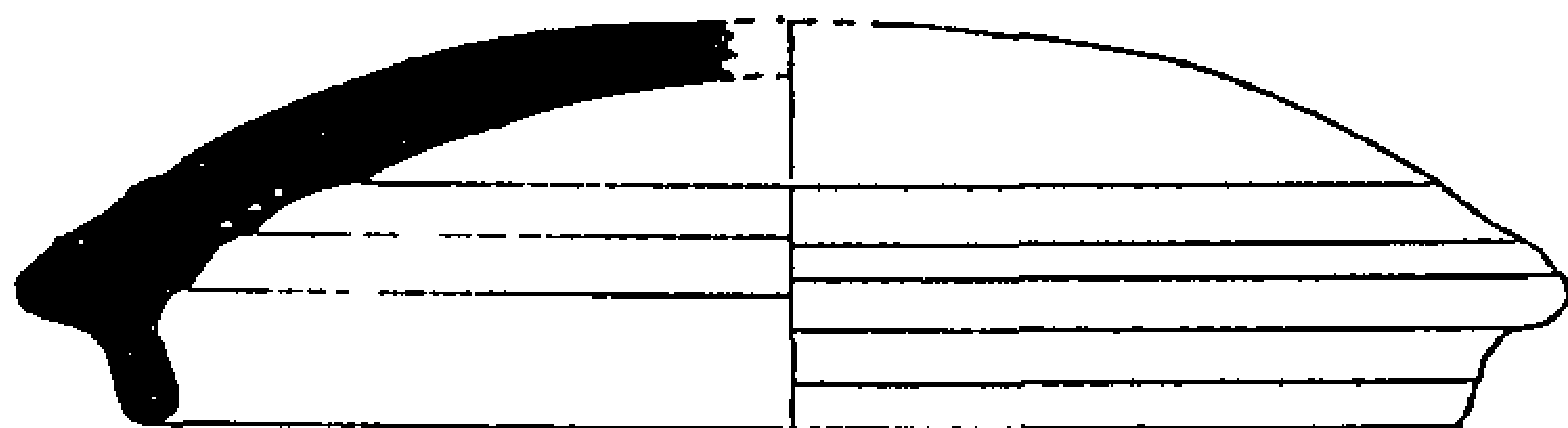
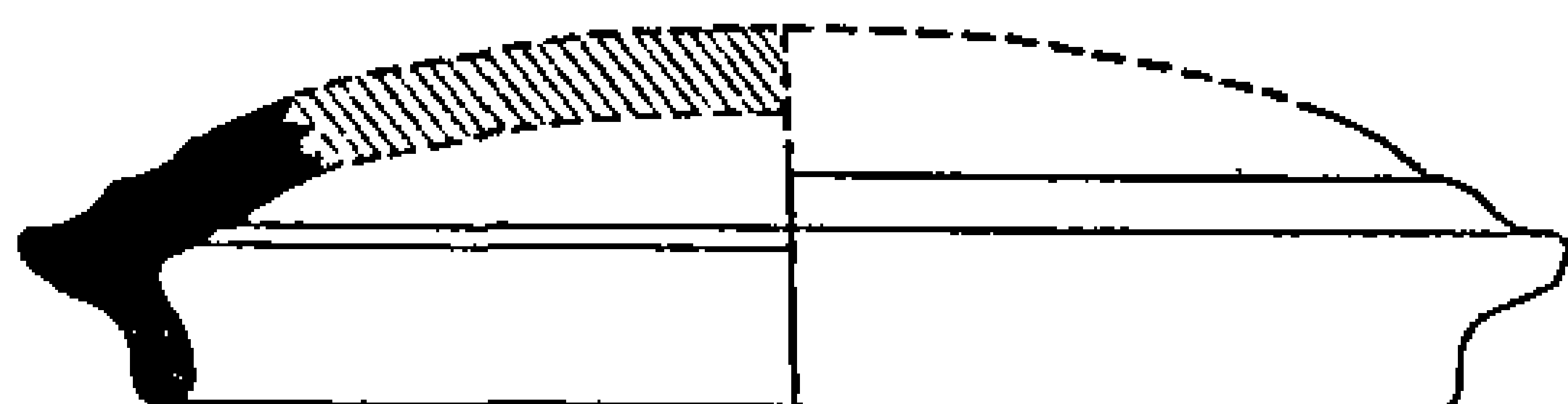


Fig 32 Type 72 Red Ware (Dishes) Layer 3 Period IV

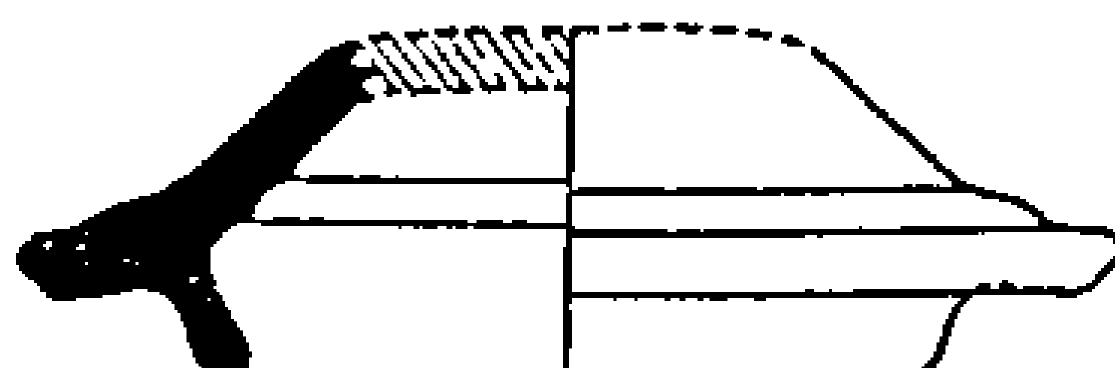
(*See p 74*)



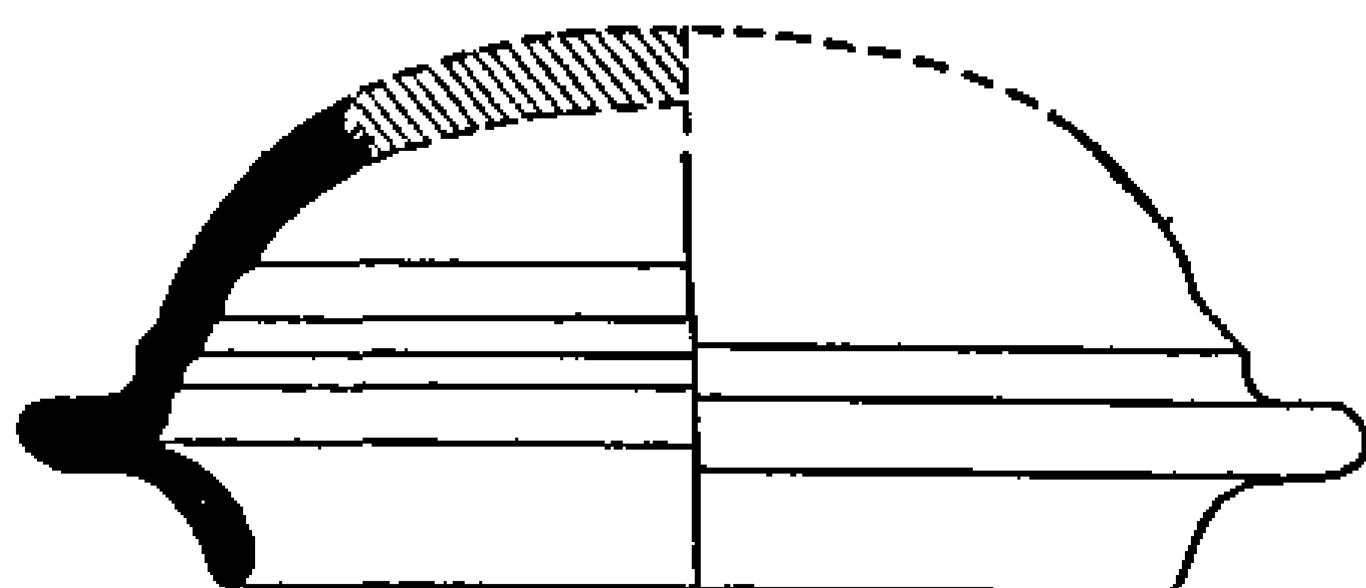
T. 73



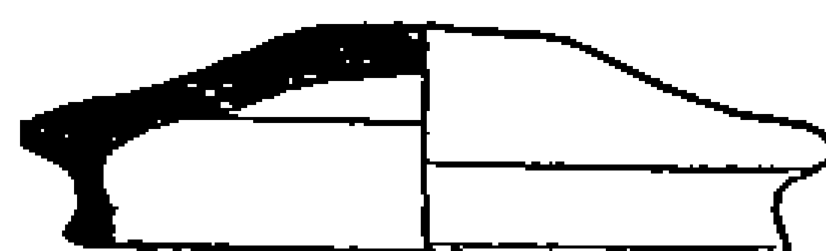
T. 74



T. 75

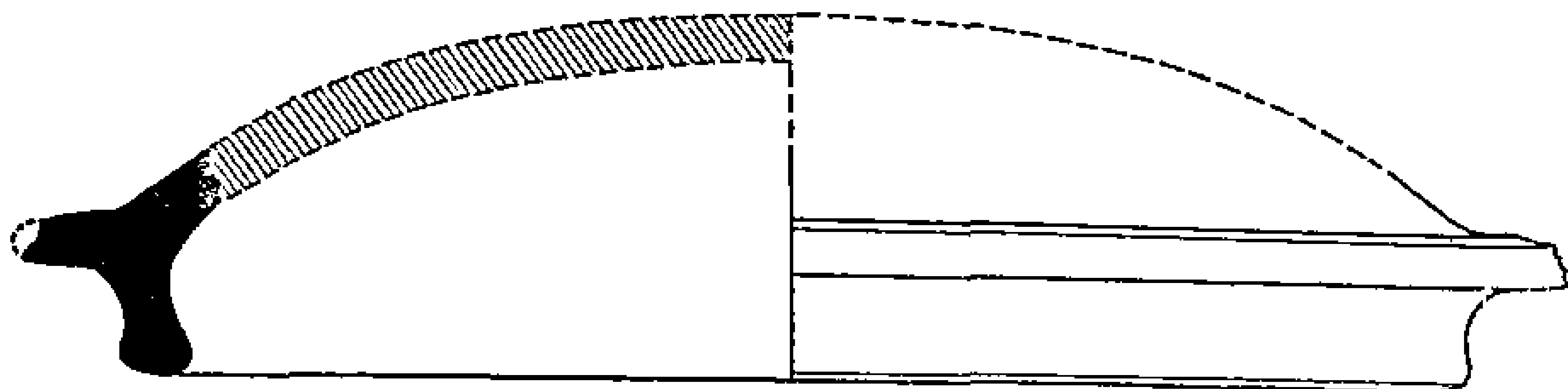


T. 76

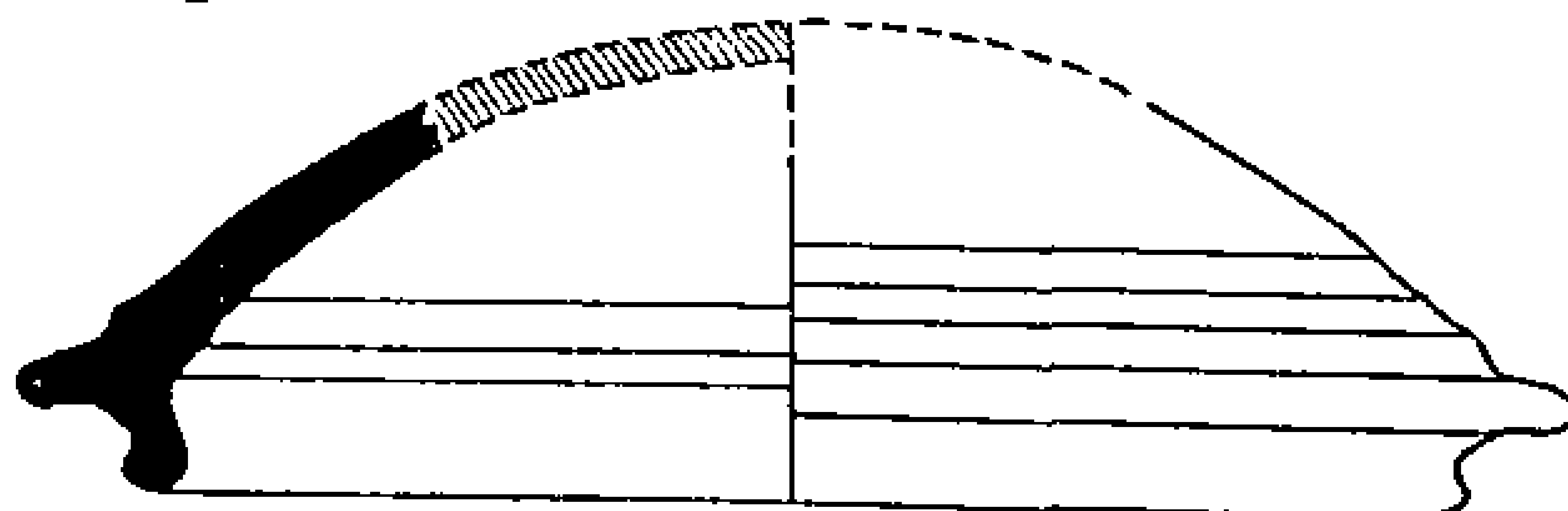


T. 77





T. 78

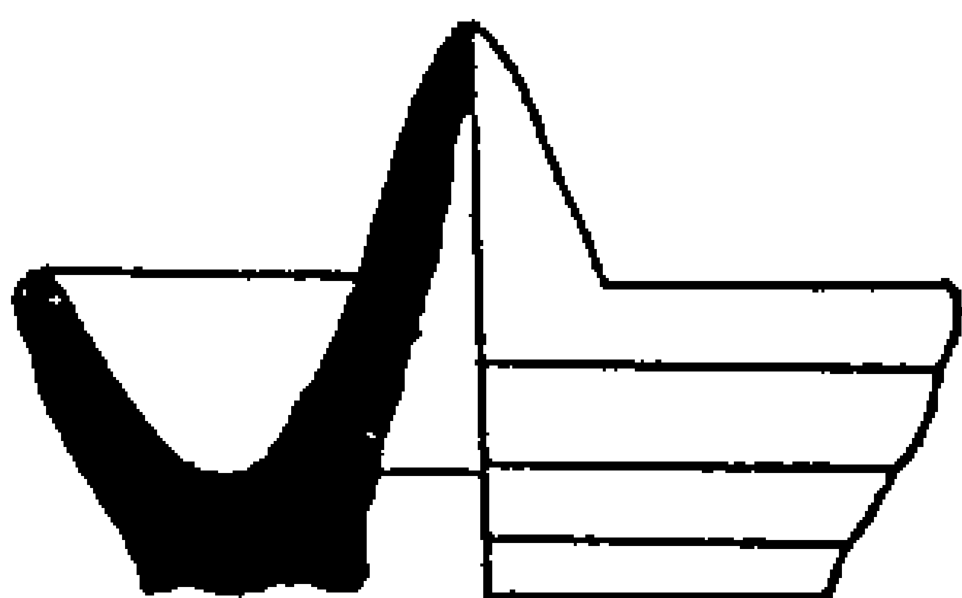


T. 79

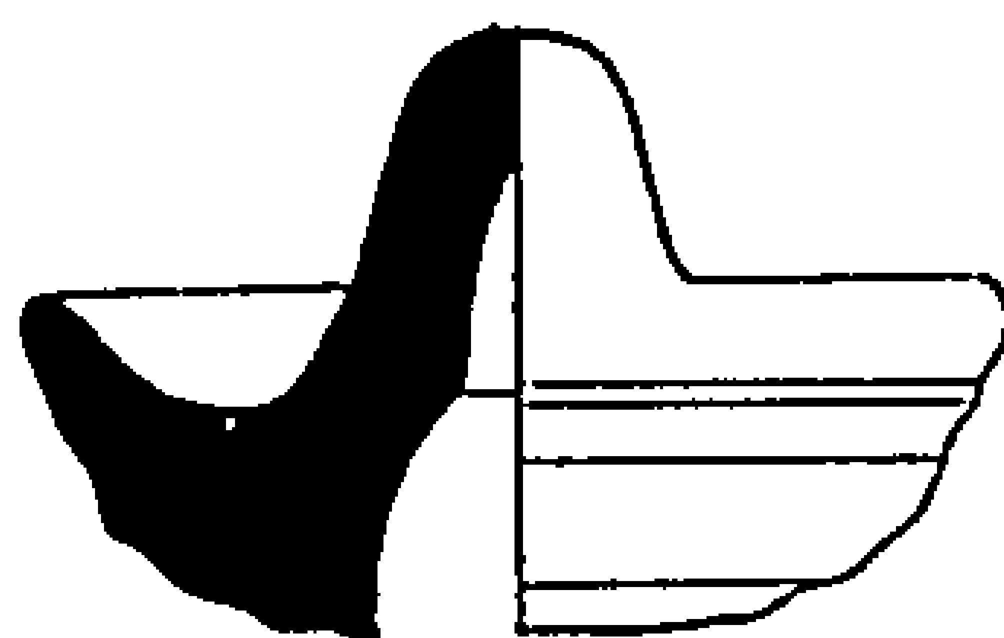


T. 80

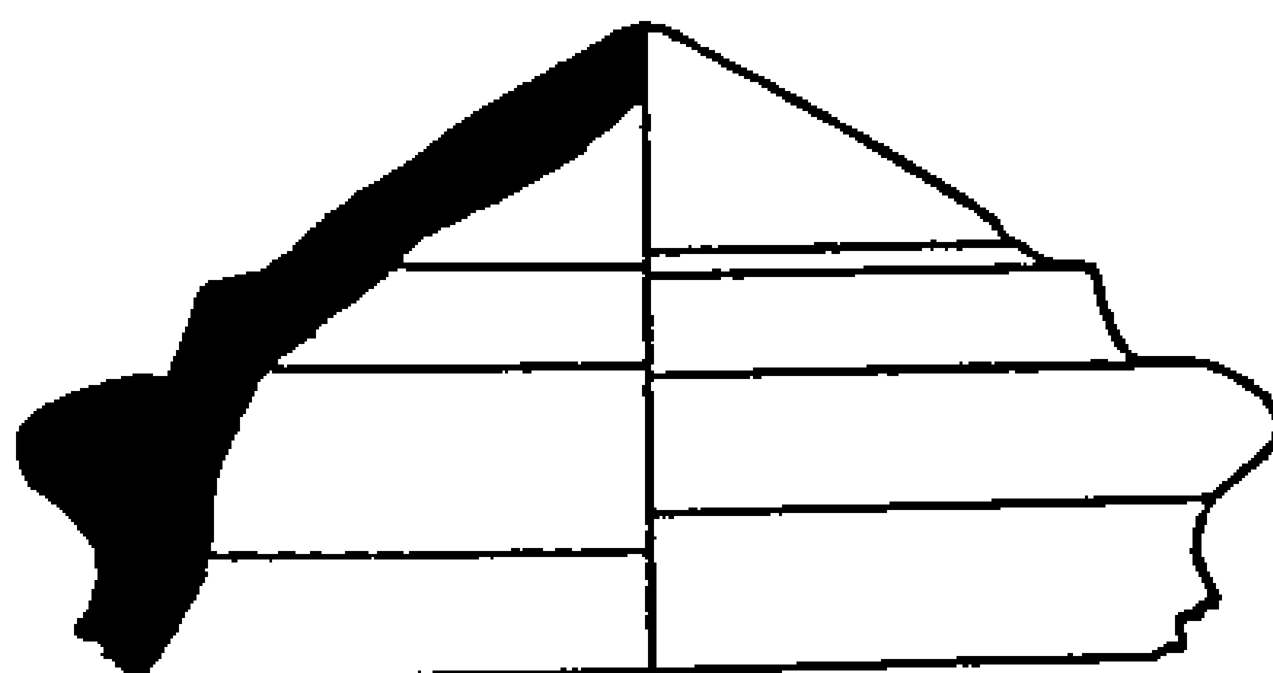
Fig 33 Types 73 80 Red Ware (Lids), Layer 3 Period IV.
(*See p. 74*)



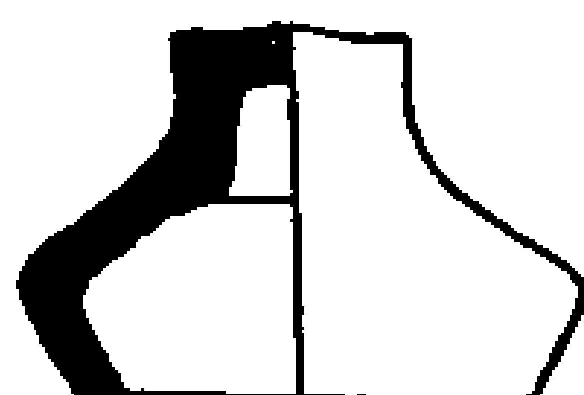
T. 81



T. 82



T. 83

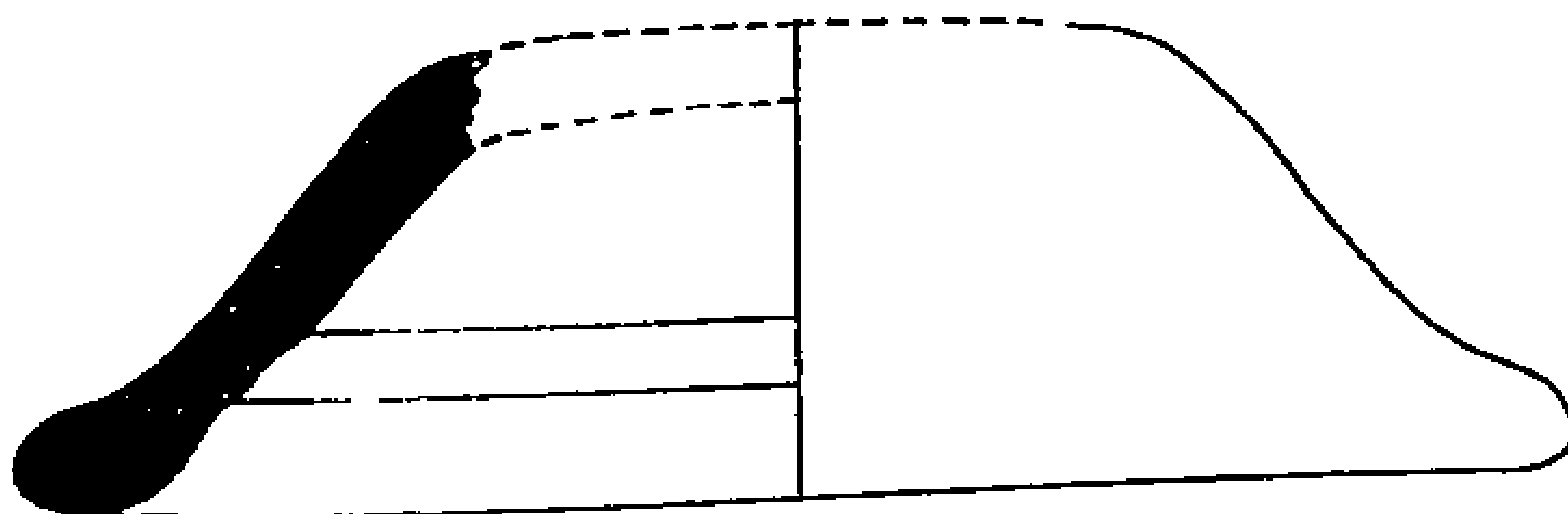


T. 84

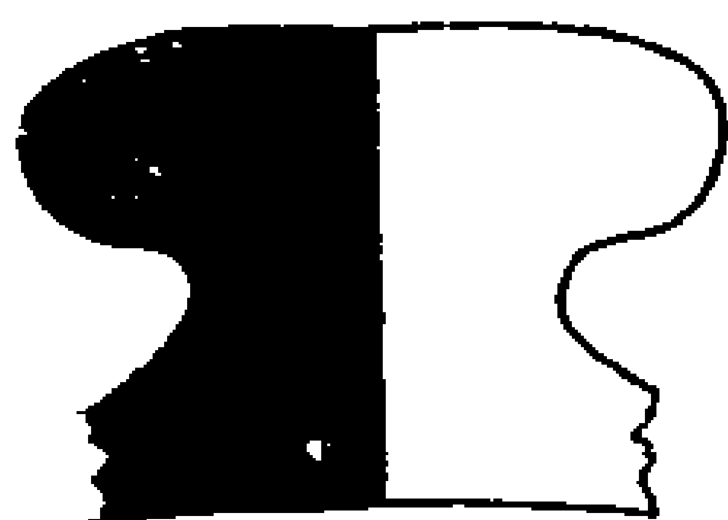




T. 85



T. 86



T. 87



T. 88

Fig 34 Types 81-88 Red Ware (Lids) Layer 3 Period IV

(See p 75)

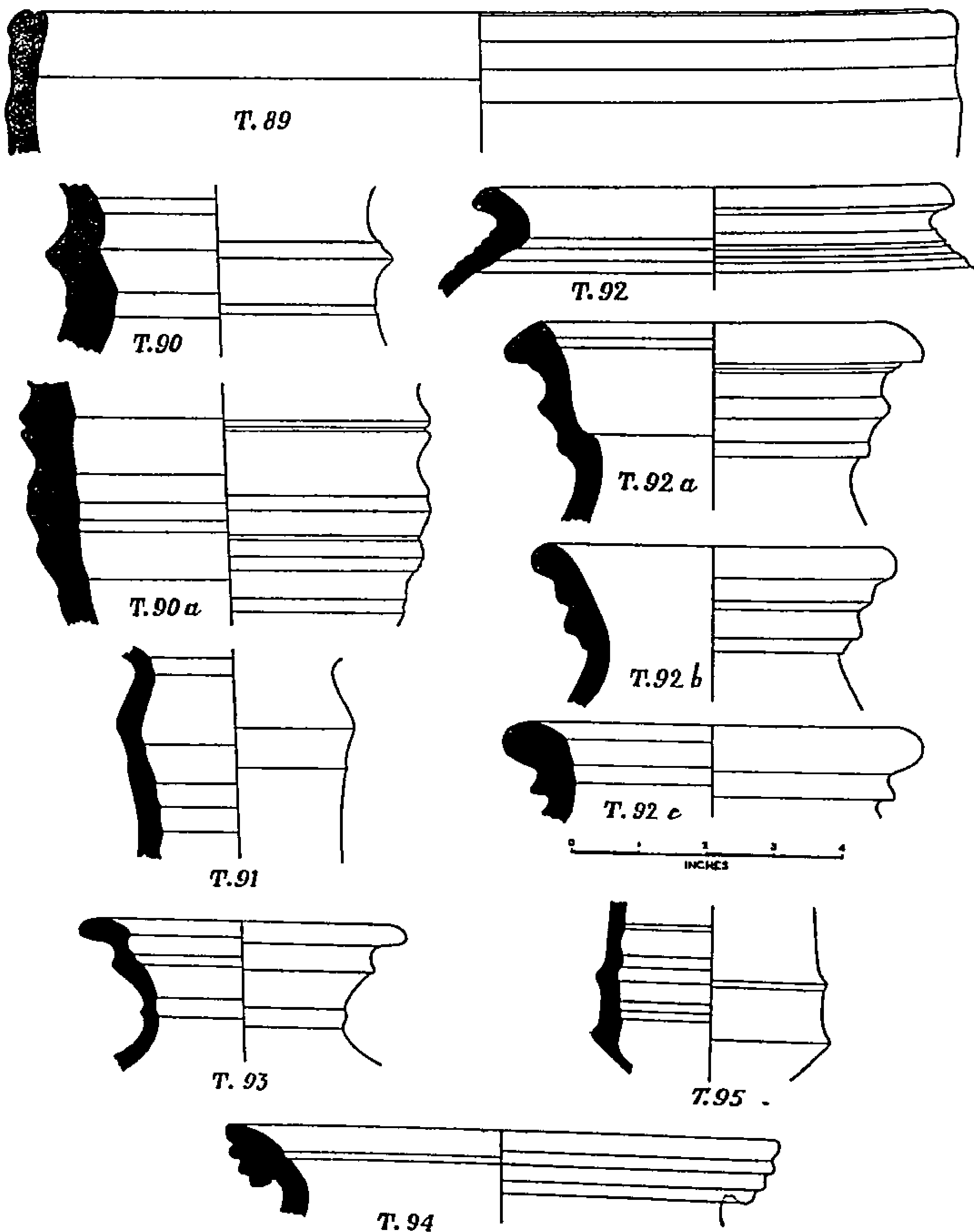


Fig 35 Types 89 95 Red Ware (R dged Necked Vessels) Period IV
(*See pp 75 76*)

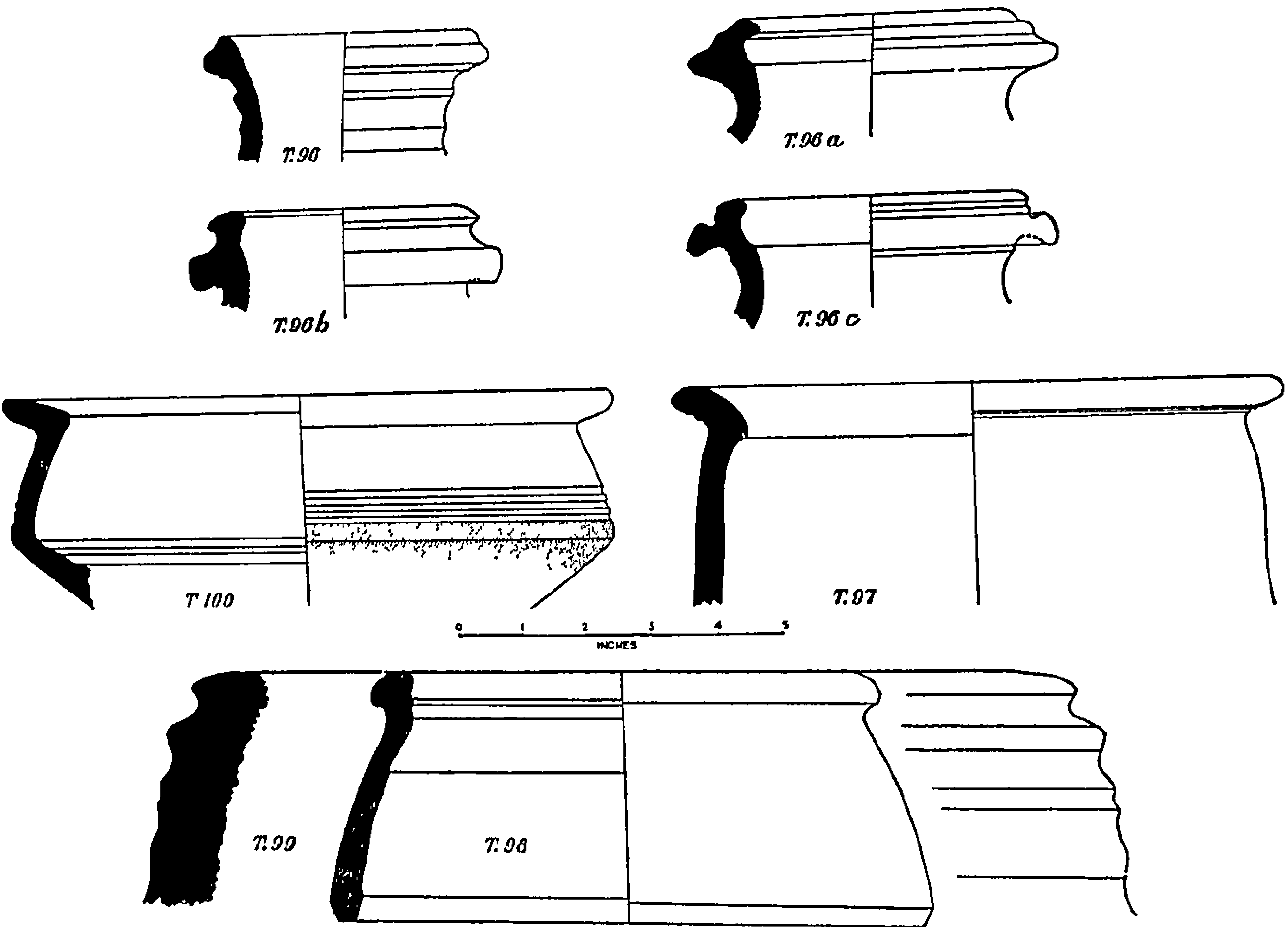
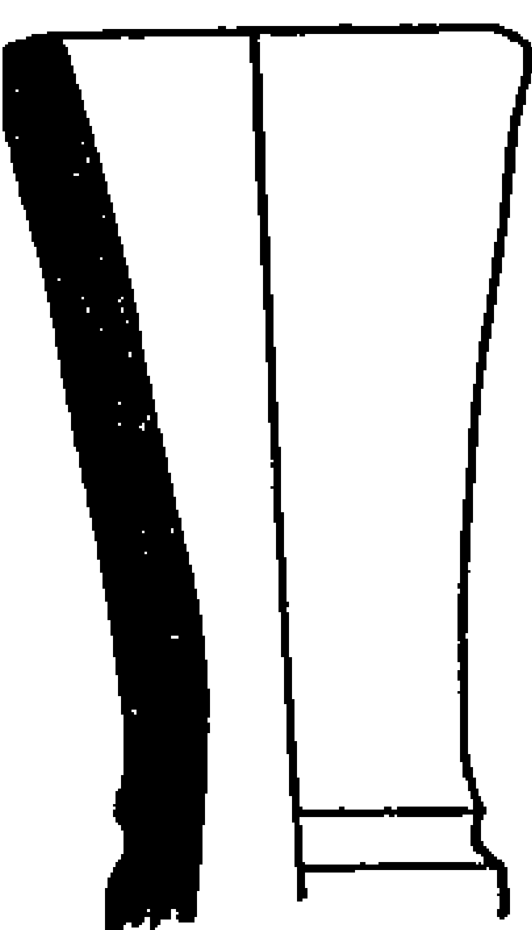
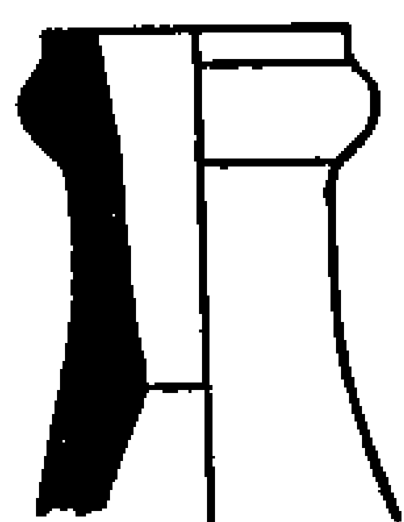
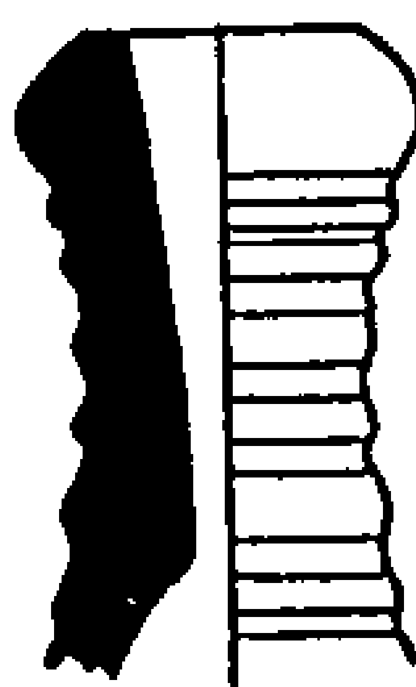
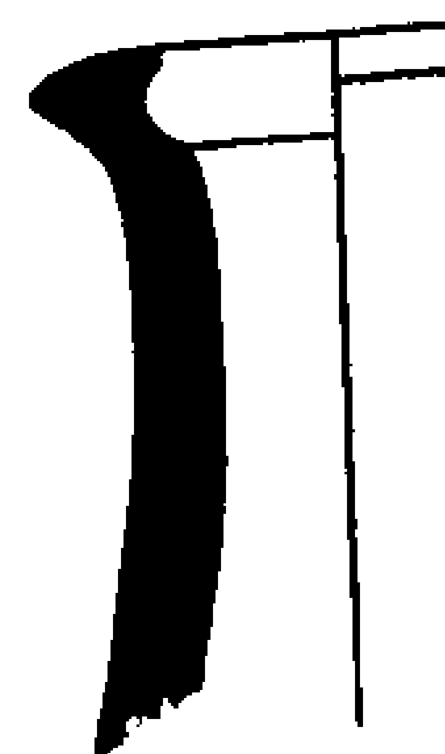


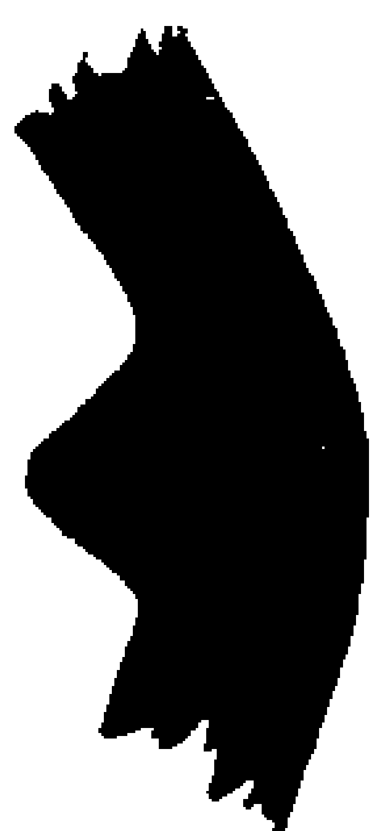
Fig 36 Types 96-100 Red and Black and Red Ware, Period IV
(See pp 76-77)

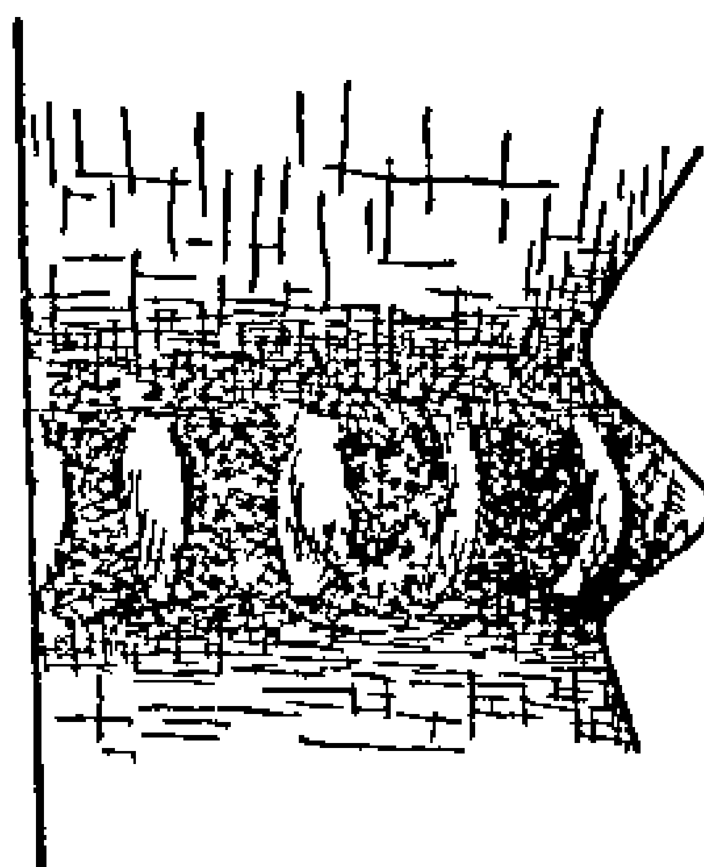




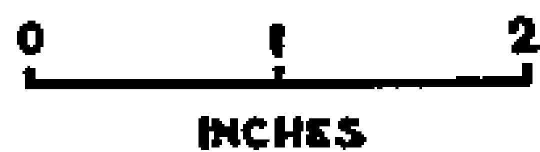


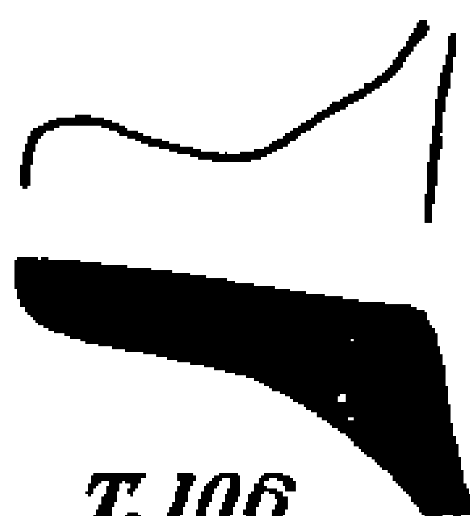


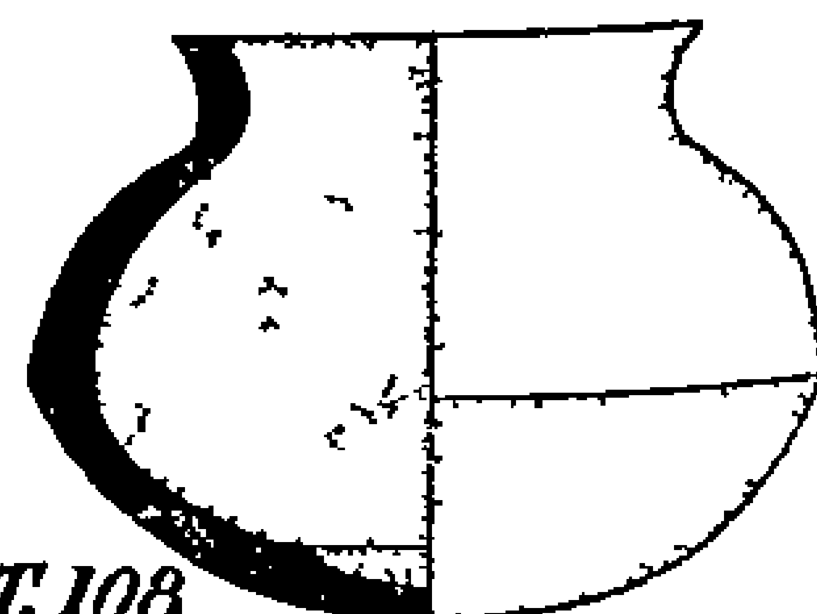












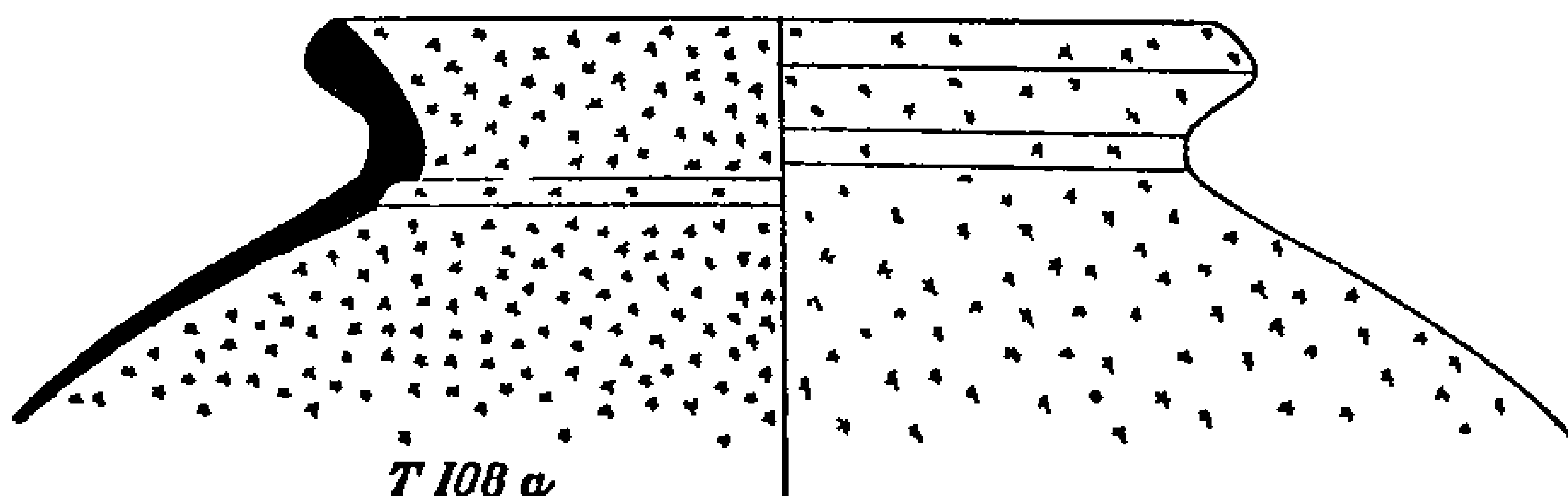


Fig 37 Types 101 108a Narrow Necked spouted and Mica Ware Period IV
(See pp 77, 78 84)

having a broad, slightly rounded base, and the inner ring was meant for receiving the lid. Both the vessel and the lid are still being made, and some in glass.

41' Fragment, solitary, of a similar vessel, but with two grooves, and the body probably rounded. Glossy surface inside and outside. No. 4638, MG N. A(4). Half of a large dish-like vessel, with rounded base having an inner raised rim surrounded by a lip-like projection In type and fabric, identical with that of Layer (5), No. 2590, K.W.N. X(3). [pl. XIII, 5].

41. Fragment, having an inner ring on the top, and lip projection (for holding), and slightly bulging, shallow (?) body. Burnished brownish black surface outside, inside smooth black. No. 2600, MG.N. A(5) Cf. similar lip. No 2611, MG.N. C(5).

TAN WARE

In contrast to the famous Black-and-Red 'Megalithic' type of ware (Types 27—39), we have comparatively a few sherds of what may be best described as "Tan," or "Tan-and-Black" ware. The outer surface and often the inside is tan or light yellow-brown, with patches of black both inside and outside. No complete vessel has been found, so what the exact proportion of these shades of colours was, cannot be determined. The fabric, as in Black-and-Red, varies from thin (1/2 cm.) to medium thickness (1 cm.). The clay is coarse and gritty, the surfaces without any wash or slip, but well burnished, giving a smooth touch. If a conjecture may be hazarded the fabric reminds one of the imitation of rouletted ware from Arikamedu.

Fig. 28. (42-47, 48, 48a).

Type 42 Small Storage Jar

42 In shape it is identical or very similar to T 27 in Black and-Red Ware This was described as a drinking vessel or a small storage jar(*Barni*) It has a beaded rim, a neck, and a slightly globular body tapering to a flat base Smooth tan surface (though now slightly coarse), grooves inside, again as in T 27. No 5731, MG N E(5) [pl XIV, 2]

Type 43 Vessel with Carinated Body

43. Fragment, vessel with everted rim and carinated body, almost similar to T 9 (Red Ware, Fig. 14), T 40 (Ordinary Black Ware, Fig 27), but with more delicate and finer fabric Base unknown but probably rounded Smooth burnished out side, but inside untouched, showing fine wheel marks No 6450, MG N. E(5)

Type 44 Boul

44. Fragment, bowl, gently incurved side and tapering, with a slight concave bend towards a flat base Fine fabric with polished surfaces No 6052, MG N E(5) From the well Exactly identical shape does not occur in ordinary Red, Black, or Black-and-Red Ware.

44a Fragment, bowl like vessel with a body below the belly slightly bulging, and sides above the belly sharply drawn in, shallow grooves on the belly Fine light fabric with smooth surface, well levigated clay MG N F(5)

Type 45 Beaded Boul (?)

45 Fragments of probably a beaded bowl, with well marked groove and raised bands, below slightly beaded rim Light fabric of well levigated clay, but surfaces coarse No 6049 50, MG N F(5)

Type 46 Large, Thick-Sided vessel with Flaring Rim.

46 Fragment of a thick sided large vessel, with flaring rim, three well marked bands below the rim Smooth tan outer surface, inside black No 6053, MG N E(5)

Type 47 High-Necked vessel

47 Fragment, high neck, with straight sides Fine fabric, with smooth surfaces No 5237, MG N (5) From the well

Types 48, 48a Lids (Cf. Type 38, Fig 27)

48 Fragment, lid, with short cylindrical knob glossy smooth surface, inside coarse, unstratified but probably from this layer. No 6039, MG N

48a Fragment, lid, with short, nipple shaped knob Tan and smoky smooth surface No 639, MG N E(4)

Fig 29. (49-49d)

Type 49 Dishes

A few sherds of dishes in this ware were found. They seem to represent two or three sub-types in shapes and a similar division may be made according to the colour of the fabric, which is tan, chocolate, and even red. But fundamentally these belong to the group of Fine Tan ware.

49 Fragment dish with almost straight sides, and rounded, shallow flat base Fine light fabric with surfaces smooth and glossy owing to polishing over a surface, over which some slip or wash has been applied No 6023, MG N C(5)

49a Fragment, dish, almost similar to above but sides slightly incurved, colour light tan No 6060, MG N G(5)

49a[1] Fragment of almost a similar dish having a thin ledge at the base and greyish tan in colour, with surfaces smooth No 6037, MG N G (5)

49a[2] Fragment dish, with straight sides No 6058 MG N G (5)

49b Fragment, dish with a shallow groove, outside tan, but inside mostly black, or nearly so No 6014, MG N A(5)

49c Fragment, with straight sides indrawn from almost an angular curve at the base which should be quite flat Tan black smooth surfaces, the clay does not seem to be well levigated, as it contains a large lump of lime concretion No 6016, MG N B(5)

49d Fragment dish with a series of thin grooves below the bulging body, and incurved sides Fine fabric, with surfaces smooth and red, with a black patch outside near the base No 5232, MG N D(5)

Period II B

This period, as discussed under Chronology, also falls into the Early Historic. The following earlier types (Period II A) survive with little or no significant variations. There are, however, a few types, which are discussed and illustrated.

(a) Principal types surviving from Layer 5.

Red Ware[1]

T 1'1	Fragment of a rim No 351A, MG N E(4)
T 1'a	Fragment of a rim No 3496, MG N D(4)
T 1'c	Fragment of a rim No 3594, MG N D(4)
T 7'	Fragment of a neck No 4627, MG N A(4)
T 8'b	Part of a globular vessel, of a much better fabric than T 8 Externally it has a smooth burnished surface over a thin coating of red slip No 5229, MG N. D(4) [pl XIV, 4]
T 9'	Fragment of a neck No 5959, MG N F(4)
T 9'b	Complete vessel No 5222, MG N [pl XII, 3]
T 10'b	Fragment, rim, and upper half No 4593, MG N F(4)
T 13'a	Fragment No 6043a, MG N B(4)
T 13'c	Fragment No 6043b, MG N D(4)
T 17'	Fragment No 2275, MG N D(4)
T 17'a	Fragment No 2272, MG N D(4)
T 17'c	Fragment No 2546, MG N D(4)
T 17'e	Fragment No 2527, MG N F(4)
T 20'	Fragment No 6020a, MG N E(4)
T 21'	Fragment No 2769, MG N E(4)
T 21'a	Fragment No 2718, MG N A(4)
T 23'	Fragment No 2618, MG N F(4)
T 26'd	Fragment, rim and shoulder, MG N G(4), with an incised ~ mark below the rim

Black-and-Red Ware

T 27'	Almost half of a vessel No 5201, MG N A(4)
T 28'	Lower half of a vessel, without inside corrugations No 5201a, MG N F(4)
T 29'	Fragment, base No 5201 b d, MG N A(4)
T 30'	Fragment, globular vessel, No 5201f, MG N D(4)
T 31'	Fragment, base No 6376, MG N E(4)
T 33'	Fragment, base No 4570a, MG N E(4)
T 34'	Fragment, No 4570 d e, MG N (4)
T 35'b	Fragment, bowl No 6285, MG N A(4)
T 35'c	Fragment, bowl No 5221a, MG N C(4)

1 For the explanation of this arrangement, see under 'Explanation,' above p 38

T 35'o Fragment, bowl No 6356, MG N A(4)
T 35 h Fragment, bowl No 5222a, MG N G(4)
T 35'1 Fragment, bowl No 6410, MG N A(4)
T 37' Fragment of a large dish, 6 inches in radius, which is only slightly less than the largest dish from Layer 5 (Fig 26, T 37)
T 37 a Three fragments No 6410 a–c Of these No 6410a has a fine external black gloss MG N B(4)
T 37'c Fragment of a dish No 6410d, MG N C(4)
T 37'd Fragment of a dish No 6410e, MG N A(4)

Ordinary Black Ware

T 41' Fragment of a Handi (cooking pot?) No 2613, MG N D(4)

Tan Ware

T 48 Fragment of a large, thick dish No 6019, MG N C(4)
T 48 a Fragment of a dish No 6061, MG N G(4)
T 48'a2 Fragment of a dish No 6002, MG N A(4)
T 49 a Fragment of a dish No 2509, MG N E(4)
T 49 a2 Fragment of a dish No 6031, MG N E(4)
T 49 c Fragment of a dish (in Black and Red) No 6401, MG N A(4)

(b) New types from period II B.

Red and other Wares. Fig. 30 (Types 50—71)

Type 50

50 Fragment, bowl, with thick, heavy, rounded bottom, and flaring side, *full shape unknown* Coarse red outside, but there is red slip over shallow inner corrugations No 2754, MG N D(4)

Type 51

51 Fragment bowl, with a low, tapering, broad flat base, very crudely made, very coarse fabric without any slip No 2754a MG N D(4)

Type 52

52 Very small shallow rimless bowl with thick walls and base Though the fabric is coarse it has a pleasing shape and finish No 149, MG N (4)

Type 53 Wide Mouthed vessel (Kundi, flowerpot?)

53 Represented by a single sherd No 2413 Fragment of a vessel having a wide open mouth resembling a *Kundi* (flowerpot) having a very thick, rounded rimless edge and tapering wall The inner as well as outer surfaces have a bright plain red slip, applied before or after careful burnishing No 2413, MG N E(4)

Type 54

54 Fragment of a rimless bowl with thickened edge, having thin shallow corrugations on the outside Smooth black inside, black and tan outside No 6359a, MG N (4)

Type 55

55 Fragment of a rimless bowl with a sharply inturned edge having a thin groove below it The base is unknown but it may have a low stand Smooth black inside, coarse outside No 6359b, MG N D(4)

Type 56

56 Fragment of a high narrow necked vessel Smooth black inside coarse outside No 6171c MG N F(4)

PERIOD III

RED POLISHED AND GREY ROULETTED WARE

The surface debris of the trench K W N as well as MG E N, and layers 3 and 4 of the latter yielded a few sherds of the Red Polished ware and a couple of Grey Rouletted ware Since, not a single sherd of these wares was found in the deeper levels of the main trench MG N, while very few sherds of the Black-and Red ware were found from the layers 4 and 3 of MG E N, as well as from the debris of K W N, it may be inferred that these, imported or imitated Roman Wares, reached Nasik after Period II Provisionally, therefore, this pottery is assigned to Period III, a period, it may be repeated, missing in the deeper layers of MG N

Of these few sherds, the one definite importation is No 850 I had occasion to show this to Professor (now Sir Mortimer) WHEELER and Dr KENYON in London They both were of the opinion that the sherd was definitely Samian From amongst the other pieces, three are necks of sprinkler vessels, and a bowl It is not ascertained yet whether the former are importations or imitation of the bronze proto type which was found at Kolhapur[1] But in all cases from their fabric and type they are distinguished from other local ware All are made of fine levigated clay, uniformly fired, having a dull red burnished surface, or treated with bright red slip, probably after firing, as it has worn off in some cases

The same is true of the rouletted ware[2]

1 See SANKALIA AND DIKSHIT *Excavations at Kolhapur* p 61 and pl XIX A For distribution of Red Polished ware see Subba RAO *Baroda Through the Ages* (Baroda 1953) pp 56 64

2 See *Anc Ind* No 2 (From Arikamedu) pl XXV XXVI No 4 (from Brahmagiri and Chandravalli) pl CXI and CXXIII respectively No 5 (from Sisupalgarh) pl XLII *Anc Ind* No 4 Fig 46 p 280

Fig. 42

Red Polished ware

(a) Sprinkler with a side spout reconstructed from three fragments as follows —

i Top of sprinkler mouth, having a smooth red, bright surface, now slightly crackled From the sides, the polish and red slip have gone No 881, MG E N (3)

ii Fragment, base of spout, having a smooth red surface without slip, the underside is coarse. No 77, K W N (3) [pl XIX, 10 12]

iii Fragment, globular side of the belly, smooth, polished red slipped surface, inside coarse, very light in weight No 46, K W N Unstratified

(b) Rimless bowl, from several fragments of smooth polished red slipped surfaces, of medium thickness, having extremely shallow grooves and a shallow raised decoration, probably by a slight pinch with finger nails, both inside and outside, No 96, K W N (3) [pl XIX, 8]

(c) Top of a sprinkler, smooth, dull red surface, inside coarse No 71, K W N Unstratified [pl XIX, 9]

(d) Fragment, globular portion (probably sprinkler), dull, but smooth outer surface, coarse inside, thin and extremely light fabric No 72, K W N (2) [pl XIX, 16]

(e) Fragment, base and side of a dish, having beautiful lustrous red surfaces, very light, thin fabric Samian Ware MG E N Ie (2) [pl XIX, 17]

(f) Fragment, rim surfaces originally smooth bright red, but crackled No 870, MG E N (3) [pl XIX, 15]

(g) Fragment of carinated shoulder, smooth bright red surfaces now crackled, very thin light fabric, comparable to true Arretine No 767, MG E N (2) [pl XIX, 14]

(h) Fragment, thin, bright red ware No 882, MG E N Ie (3).

(i) Fragment of the globular part of an extremely thin, chocolate coloured vessel, having a smooth surface, but the inside, though coarse, marked by fine close grooves, suggesting a very fast wheel MG N C(1) [pl XIX, 13]

Rouletted ware

(j) Fragment of rouletted ware, polished light grey surfaces the upper shows a portion of a circular band the under a broad, lightly incised circular band No 868, M G E N. If Unstratified [pl XIX, 1]

(k) Fragment of a rouletted ware, the upper surface is polished black with a little roulette band intact, on the under surface the black has worn out so that the greyish surface has been exposed No 841, MG E N If Western section of the trench, almost top soil The rouletting is of the type found in some vessels from Arikamedu [Cf *Anc Ind* No 2, pl XXV B No 8, pp 45 49] [pl XIX, 2]

(l) Fragment probably of rouletted ware Polished black inner surface, outer or under coarse and greyish without black slip MG E N If (2)

(m) Tiny fragment, having both the surfaces polished black No 898, MG E N Unstratified

(n) Small fragment, probably rouletted ware Surfaces smooth but have lost their black slip No 898a, MG E N Unstratified [pl XIX, 3]

(o) Fragment, probably of a small dish or bowl of rouletted ware, having fine, polished black surfaces, No 5068, MG E N Ie(4) [pl XIX, 5]

(p) Fragment, rim, everted, of a rouletted like fine, thin, polished ware Unstratified [pl XIX, 6]

PERIOD IV

Period IV pottery comprises all the types from layers 3 to 1 in the main trench as well as from the upper layers from K.W.N., MG.E.N., and MG.N.N. The main reasons for grouping all these together is that though there is some evidence to divide the upper layers in MG.E.N. into Mughal and Maratha or into Periods IV and V respectively, elsewhere, particularly in MG.N., the first two layers are very much disturbed, while the third shows distinct overlap in types as well as in fabrics. Thus the latter cannot be put into a distinct period. Further there are many common types and fabrics between the mixed layers of MG.N. and the stratified layers of MG.E.N., showing that the disturbance was during the Mughal-Maratha periods.

The pottery types are, therefore, arranged as follows :—

(*a*) Principal types surviving from Period II (Layers 5 and 4).

(*b*) New types.

The former are merely cited layerwise and by type as before, the latter discussed and illustrated.

(*a*) PRINCIPAL TYPES SURVIVING FROM PERIOD II.

RED WARE

T 8"b	Small drinking vessel with narrower mouth than T 8b No 325, MG N. D(3) *Not illustrated*
T 8"e	Base of a vessel only No 4532a, MG N F(2)
T 9"a	Vessel with carinated shoulder No 6252, MG N D(3) A sherd of a similar vessel from MG E N No 6252a MG E N. Ik(3)
T 10"a	Fragment No 3664, MG N E(2)
T 10"b	Fragment No 4601, MG N F(2)
T 12"a	Fragment, bowl No 2147, MG N A(3)
T 13"	Bowl (reconstructed) No 6043, MG E N (3)

BLACK WARE

T 23"c	Fragment, lid or dish No 2612, MG N A(3)
T.23"c	Fragment, lid or dish No 4659, MG N B(2)
T 26"	Fragment, rim No 4100b, MG N (2)
T 26"c	Fragment, large storage jar No 694a, MG N (3)
T.26"d	Fragment, rim No 4154, MG N E(2)
T 26"e	Fragment, rim No 4086 MG N F(2)
T 27"	Lower half of a vessel No 5202a, MG N A(3)

Black-and Red Ware

T 29″ Fragment, base No 5201e, MG N F(2)

T 30″ Fragment, base and side No 5201f, MG N C(2)

T 35′ Fragment, bowl No 6307a MG N (3)

T 37′ Fragment, dish No 2015, MG N G(3)

T 37′a Fragment, dish No 2011, MG N G(3)

T 37′d Fragment, dish No 6308 MG N (3)

Ordinary Black Ware

T 40″ Fragment, No 2816, MG N E(2)

T 41″ Fragments, Nos 2598 97, MG N A(3)

T 45′a Fragment of a bowl with a slightly externally beaded rim The type is similar to T 45 (Tan Ware) but the fabric of this is light brown, from which the slip is wearing off It has a very shallow, thin, raised band on the outside No 715, MG N A(3) *Not illustrated*

T 49″b No 2221, MG N C(3)

(*b*) New Types From Period IV.

Fig 31. (57-71)

Type 57 Bowls

The bowl types occurring in this period have comparatively thicker walls and are coarse in finish

57 Fragment lower portion of a heavy round bottom vessel (bowl ?), having a ledge, (the belly ?) or (the edge ?) smooth red outside with a red slip, inner is graduated, the base is very coarse while the broader portion above it is smooth, but without slip No 4597, MG N A(3)

Type 58 Bowl

58 Fragment base of bowl having very thick heavy, rounded coarse blackish base The inside is still coarser and fully black Full shape not known No 4597a, MG N C(2)

Type 59

59 Fragment, base and side of a vessel (bowl ?) with thick small flat base, and thicker globular side, very coarse internally and externally No 4597b, MG E N E(4)

Type 60

60 Fragment bowl but with narrower sides This bowl has traces of red slip inside No 2754b, MG N D(3)

Type 61

61 Fragment, base, bowl No slip Coarse red surfaces No 2754c, MG N D(2)

Type 61a

61a Fragment, bowl, with greatly flaring sides, which have irregular grooves outside Broad, flat base Very coarse fabric No 2754d, MG N C(2)

Type 62

62 Fragment, bowl, with flaring side but gently incurved at the top, tapering, narrow, flat base Very crude The vessel has a dusty muddy coating No 1759, MG N G(2)

Type 63

63 Fragment, bowl, with a deep base inside Irregular heartshaped, flat base No 1759a, MG N B(2)

Type 64

64 Fragment, saucer like shallow bowl, with an irregular, crude, ringed base No 1759c MG N B(2)

Type 65

65 Fragment of a thick, bowl like vessel with a tapering base, exact shape indeterminate Fabric coarse No 1759d MG N D(3)

Type 66

66 Fragment of a very thick, bowl like vessel with a tapering base The inner side is comparatively smooth and has red slip The outer is extremely coarse No 1759e, MG N B(3)

Type 67

67. Fragment of a vessel, similar to T 61 but having a deeper inner base, and is coarse inside and outside No 1760g, MG N E(2)

Type 68

68 Fragment of a vessel, similar to T 62, but slightly less thick fabric and not so deep No 1907, MG N G(2)

Type 69

69 Fragment base only, of a vessel (bowl ?) having a shallow groove on the inner side of the base The sides were probably steeper and flaring No 1759f, MG N D(3)

Type 70

70 Fragment of a bowl, having flaring sides with a faceted slightly internally overhanging rim, and a crude but well projected ringed base The surfaces otherwise smooth and not so coarse as in previous types In every way a distinctive type MG E N Ie(4)

Type 71

71 Very small, shallow rimless broad flat based bowl with low flaring sides the edge of which has vertical incisions all round This looks like modern cake jackets The inside surface is smooth No 149a MG N B (2)

Fig 32 (72, 72a-72e)

Dishes

In this layer, dishes of almost new types or dishes with merely different rims appear. They have a small low or fairly high rim which is indented and turns very sharply inside. The fabric is generally coarse red, with or without slip, except with one exception

72 Fragment of a shallow dish, with rounded base, and a very low rim which sharply turns in Red slip with smooth surfaces No 2749, MG N D(2)

72a Fragment, similar to T 70, having a sharper ledge like junction of the rim and body and a turned in rim, rounded at the top Dark brown with smooth surfaces No 2750, MG N D(2)

72b Fragment similar to T 70, but fabric coarser and thicker, and a groove and a thin raised band on the lower part of the rim No 2403, MG N E(2).

72c Fragment of a dish, having a small ledge below slightly inturned rim, with a high straight wall Very coarse fabric, without slip and black on the edge of the rim No 2398, MG N E(2)

72d Fragment, similar to T 70 c but the wall of rim slightly smaller, and the fabric better No 2402, MG N D(2)

72e Fragment of a dish, similar to T 70'c, but the side slightly longer, and the fabric very coarse No 2189, MG N B(2)

Fig 33 (73 80)

Types 73-80 Lids

The lids in this ware, at this period, have generally a low roof, and a thicker ring, with a broad, deep groove on the outside The fabric is usually coarse red, without any slip

73 Fragment of a thick, large lid, having a low roof Faint grooves outside and inside No 2704 MG N A(2)

74 Fragment of a smaller lid, with thick low roof Faint grooves outside and inside No 2703, MG N A(2)

75 Fragment of a small lid, having a sharpened bevelled edge No 2752, MG N D(2)

76 Fragment of a small lid, with a comparatively high roof It has a bright red surface *The type comes from Layer* (4) No 2718, MG N A(4)

77 Fragment of a very small lid with low roof It has a finely sharpened edge, and a well marked groove No 2856, MG N A(2)

78 Fragment of a large lid having a well projected roof edge as in Period II, though the roof itself is low No 2702, MG N A(2)

79 Fragment of a lid, which has a roof comparatively higher than lids of roof in this period, a ringed base which is thick and flat This type of lid may be taken as a link between the basic types of Period II and III

80 Fragment of a unique type of lid at Nasik Its upper surface is finely polished over a reddish slip, whereas the lid itself had a tapering top, probably ending in a knob No 0234, MG N D(3)

Fig. 34 (81-88)

Types 81-86 Lids

The figure represents types which are totally different in shape from those illustrated in Fig 33, as they have some points of resemblance with the lids of Period II.

81 Lid, almost complete with a conical central knob, and almost vertically upturned side and flat base Crude, red, slipless surface No 6235, MG.N B(2)

82 Lid, complete, with a truncated conical roof, slightly low, upturned side, and rounded base Dirty grey ware No 6212, MG N B(2)

83 Lid complete, with a low pointed roof, having well marked grooves and ridges, a slight protruding, rounded rim, with an inner ring K W N surface

84 Small lid with a protruding, but truncated flat top, inturned, flat base Surface

85 Small lid of the older type, with a terraced, flat roof, a overhanging rim, and an inner ring No 786, MG S N Unstratified

86 Fragment of a thick lid, having a low, flat roof The edge is finely rounded MG S N(2)

Types 87-88 Lids with knob-handle

Handles of probably lids of this type appear for the first time in Layer 3

87 Fragment of a lid with transverse, biconvex knob having tapering but blunt ends No slip seems to have been used, and the surface is coarse red No 2144, MG N G(3)
The origin of this type may be traced to Period II from which only one fragment comes

88 Fragment of a lid as above, but much thinner, and with a smaller transverse knob It has smooth surfaces No 623, MG N A(4)

Fig 35 (89-95)

Type 89

89 Fragment of a large rimless bowl having a very thick body and sides, the surfaces of which had a red slip over coarse surfaces On the outside, the body is almost imperceptibly thinner near the top so that a shallow depression is visible No 2264, MG N D(3)

Types 90-90a Ridged ware

Only three or four sherds of these types of vessels have been recovered From the fragments only, an idea of the true shape and size of the vessel cannot be had

90 Fragments of a thick sided vessel, probably the neck portion or similar such cylindrical part, marked by deep, broad grooves and bold ridges Inside, both these are not very prominent Traces of red slip outside, though the surfaces are rough inside and outside No 855a b, MG N E(3)

90 a Fragment of a vessel similar to T 90 Its outside is marked however by an alternating series of broader and narrower grooves and the ridges are not prominent The inside is also comparatively plain though close wheel marks are there Traces of red slip outside though surfaces coarse No 4589 MG N B(2)

Type 91

91 Only a solitary sherd of the cylindrical part of a vessel having a low ridge at the shoulder (?) Its body above sharply turns in and had probably an everted rim The inner part of the portion below the ridge is marked by shallow corrugations The outside is smooth and had a bright red slip but the inside is unslipped and coarse No 855c MG N A(3)

Types 92 92c Ridged Necks

Layer(5) had given a type of vessels (*Cf* Type 6c 6f) where the neck was narrow and its rim was cut into one or two grooves or corrugations But we, now, have specimens where these grooves and ridges occur on the necks, or where, as in Type 96, the edge of the rim expands into a series of concentric circles or ridges

92 Fragment of a vessel with a low everted rim its shoulder marked by very low grooves and ridges respectively The surface is crimson black and well polished inside coarse red No 4693 MG N (3)

92 a Fragment of a high narrow necked vessel Its outside has prominent grooves and ridges which are not so prominent inside Traces of dark red slip outside and on the inside edge of the rim No 2629 MG N A(3)

92 b Fragment of a neck with external corrugations plain inside No 2690 MG N E(3)

92 c Fragment of a neck with external corrugation No 2421 MG N A(2)

Type 93

93 Fragment of a low narrow necked vessel with external ridges and a deep depression below the edge of the rim inside Crimson red slip on this and the outside rest unslipped coarse brown No 2622 MG N B(2)

Type 94

94 Fragment rim of a vessel which is externally cut up into three narrow but deep grooves and bold ridges A narrow but shallow groove inside Red slip No 2631 MG N A(3)

Type 95

95 Sherd of a cylindrical vessel having prominent ribs outside and grooves inside Smooth red slipped outside surface inside coarse and unslipped No 6819 MG F N (1)

Fig 36 (96 100)

Types 96 96c Vessels with Ridged Neck and Ringed-Rims

96 Fragment of a narrow high (?) necked vessel which has shallow grooves and ridges on its outside while the edge of its rim has a low inner ring preceded by a shallow groove(or a projecting ring or ridge round the edge of the rim) smooth red slipped surfaces No 2623 MG N A(2)

96 a Fragment of a vessel similar to T 96, but there are no grooves on the outside, while the groove preceding the inner ring is deep No 2617, MG N B(2)

96 b Fragment similar to T 96a, but the groove preceding the inner ring is now very broad No 2626, MG N A(2)

96 c Fragment of a vessel similar to T 96'b, but its inner ring is on the same plane with the surrounding ring and projects over No 2625, MG N A(2)

Type 97 Straight-sided, Pateli like vessel

97 Large fragment of a vessel with high straight sides, having an everted rim, with a deep, but slightly rounded bottom exact shape unknown The vessel when com plete, would resemble the modern vessels called PATELI in brass, copper and other metals *So far a unique type at Nasik* The fabric is moderately thick, having a blotchy red and black appearance, which is smoothed but has no slip whatever No 2604, MG N B(2)

Type 98

98 Large fragment of a unique type of vessel perhaps a pottery stand, which has a narrow mouth, broader body but no bottom Instead the bottom end has a flat base, with its edges well smoothed from inside and slightly caving in from outside Coarse light red fabric, full of grit sand and lime particles, but well baked No 1429, K W N (3)

Type 99

99 Fragment of a vessel with extremely coarse and uneven surface, with a large groove below the rim, and very shallow below Hand made No 1429a MG E N Ik(3)

Type 100

100 Large fragment of a vessel with wide mouth, everted flat topped rim angular side and heavy slightly rounded base The fabric is very thick for the size of the vessel, with coarse surfaces red slipped inside, outside the upper portion is red but that along and partly below the carination is blackish while the base seems to be red The inside of the base has grooves No 4070 MG N B(2)

Fig 37 (101-108)

Types 101 108 Narrow Necked, Spouted and Miscellaneous Types

101 High, narrow neck of a *Kujah* type vessel Two irregular grooves towards the base Bright red smooth surface externally internally dull and coarse for want of burnishing and slip No 6264 MG E.N (2)

102 High narrow neck of a *Kujah* or a bottle shaped vessel It has an externally beaded rim which is flat on top Dull brown smooth surfaces MG N Unstratified

103 High ribbed neck of a vessel which becomes very narrow towards the base Smooth bright red slipped surfaces No 6205 MG N C(1)

104 High narrow neck of a *Kujah* type vessel It has broad flattened, overhanging edge Originally smooth and bright red externally, but coarse internally No 6205a MG N A(2)

105 Neck portion of a large, thick walled vessel The neck has a prominent corrugated rim, and seems to have been covered with a white, lime like substance Very coarse surfaces, probably hand made No 6205b, MG N G(1)

106 Short side spout of a vessel, originally with smooth bright red surface externally No 6205c, MG N Unstratified

107 Small vessel with a solid projected flattish base, narrow mouth (rim broken) and bulbous body Coarse, dull brown surfaces No 5228, MG N Γ(2)

108 Small vessel with rounded base, bulbous body, and a comparatively narrow neck having a flat top Coarse reddish black body, thin, whitish film inside No 5228a, MG N Unstratified

BLACK-AND-RED WARE

Fig 38 (109-117)

Types 109-117 Bowls and Dishes

109 Fragment, rimless bowl with almost vertical upper side and rounded base No 1845, MG N G(2)

110 Fragment, rimless bowl with straight outturned sides, and flat base No 1836a MG N (2)

111 Fragment, rimless bowl, with slightly inturned side angular cut base, which is slightly rounded No 1836a, MG N

112 Fragment rimless dish or bowl, with thin sides, fine and smooth, turning at the edge, which is sharpened No 1836b, MG N

113 Small rimless bowl, with a low ringed base, and grooves near the edge No 6358 MG S N (2)

114 Small rimless bowl with flaring top, slightly concave sides and rounded base

115 Small rimless bowl straight sides with ringed base No 6342, MG S N (2)

TAN WARE

Types 116-117

116 Small fragment of a rimless bowl with thick, straight sides, and rounded base No 6024 MG N

117 Small fragment of a rimless bowl with slightly flaring sides and perhaps a ringed base Burnished smooth over a thin slip of the same colour as the core No 6001 MG N A(3)

ORDINARY BLACK WARE (*Cf* Fig 27 and Fig 40)

Very few sherds of Ordinary Black ware turned up in layers 5 and 4 Even from layer 3 they are not many They are comparatively more, however, from layers 2 and 1 As Chinese porcelain pieces also came from these layers, most probably they belong to the latest period of the occupation of the mound The sherds comprise mostly rim fragments So a fuller idea of the shapes of all the vessels, is not possible The fabric of these vessels is coarse, but usually the surface is well burnished Nothing seems to have been applied over it before burnishing

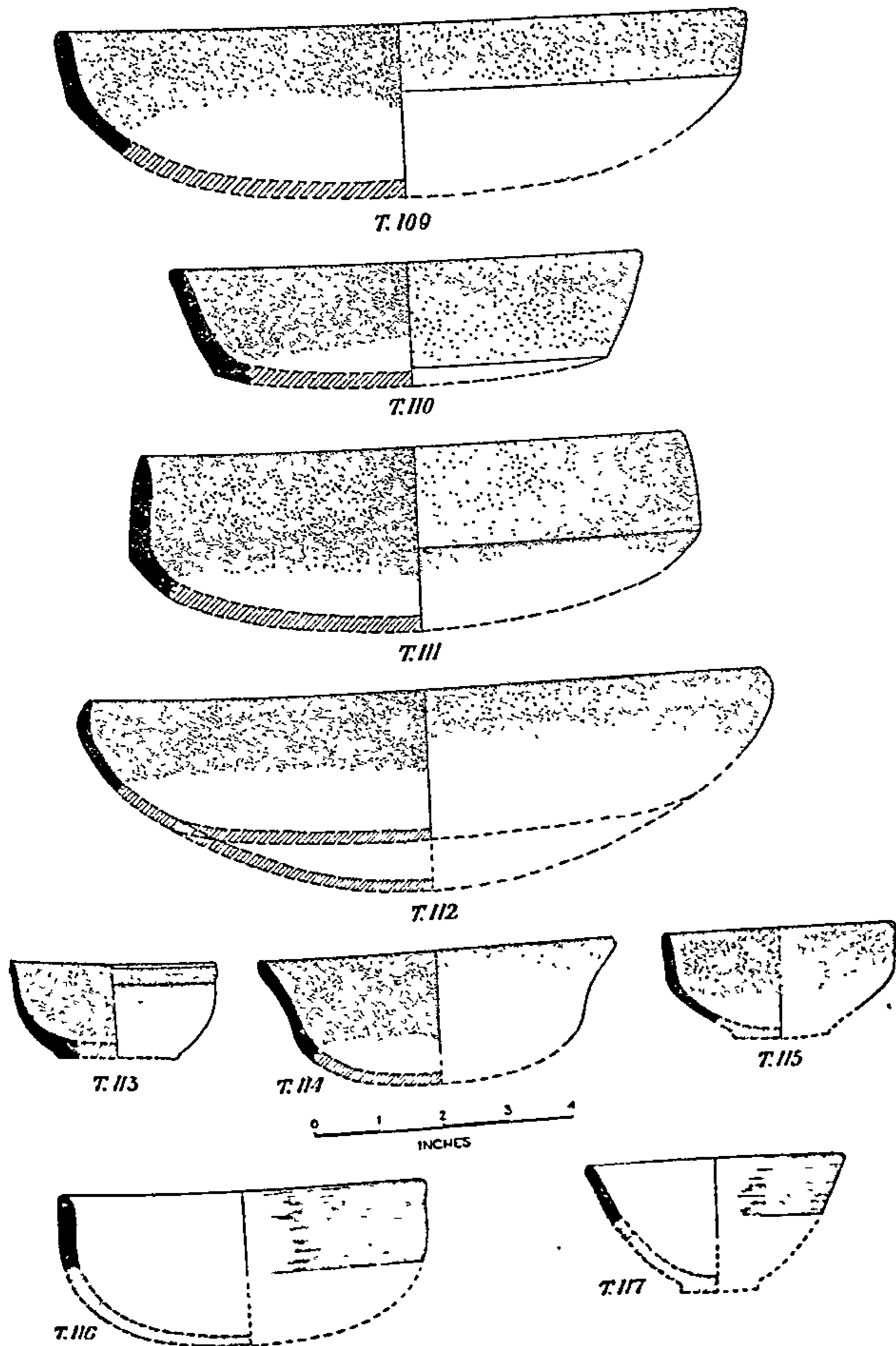
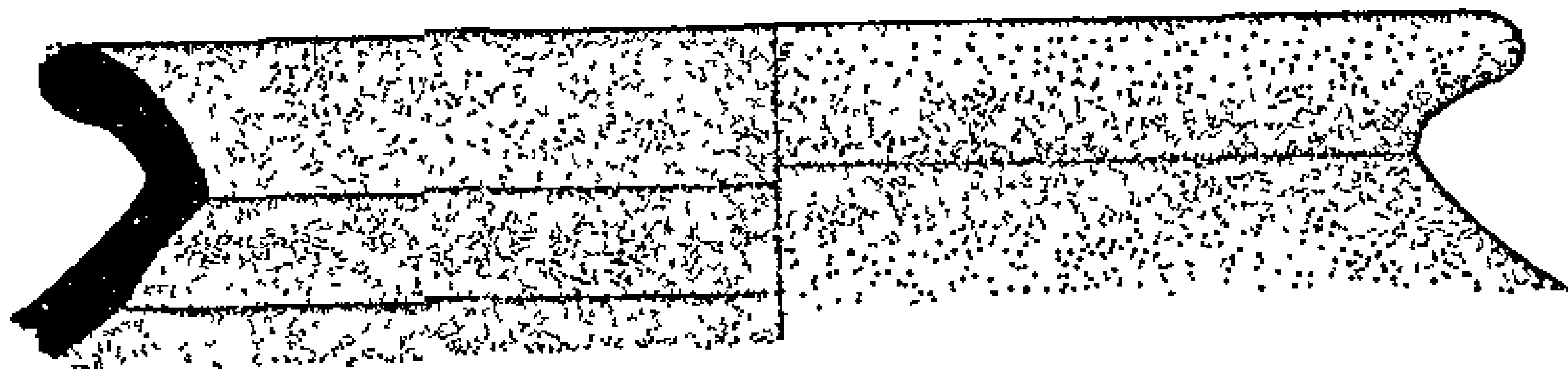
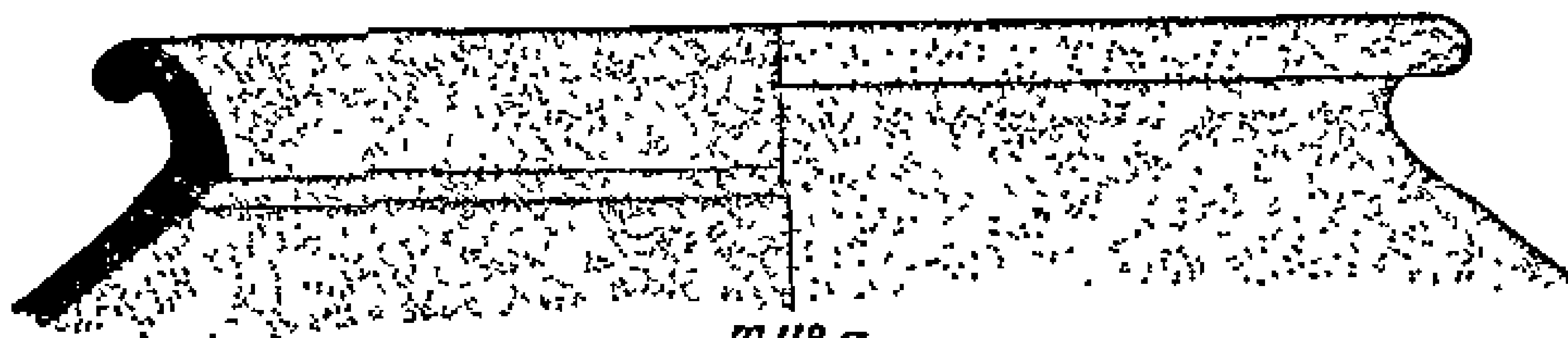


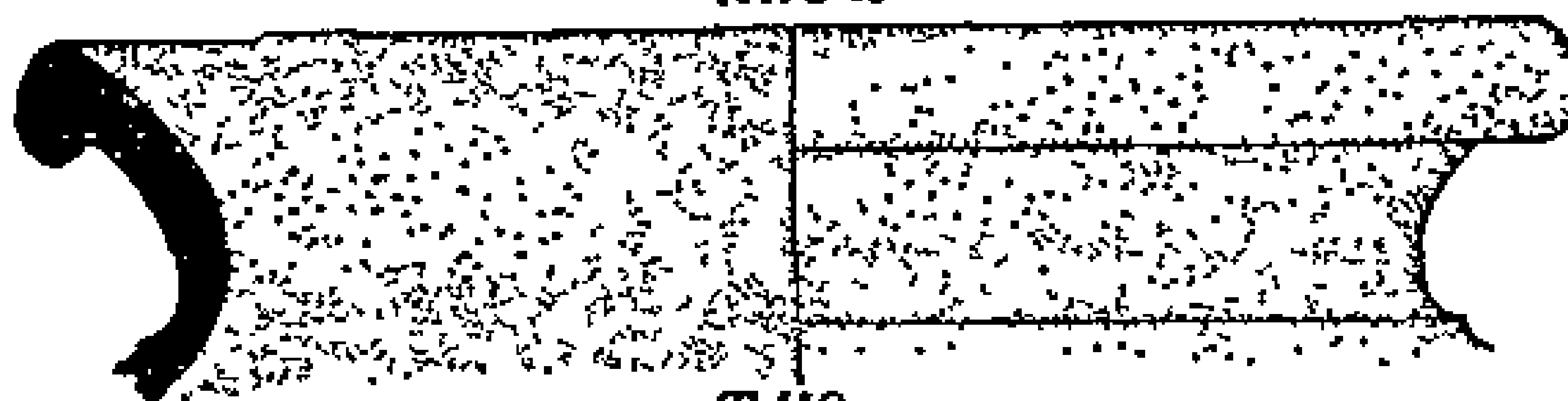
Fig. 38 Types 109–117. Black and Red Ware (New Types) and Tan Ware (See also Types 27-29 and 42-49) Period IV.
(See p. 78)



T. 118



T. 118 a



T. 119

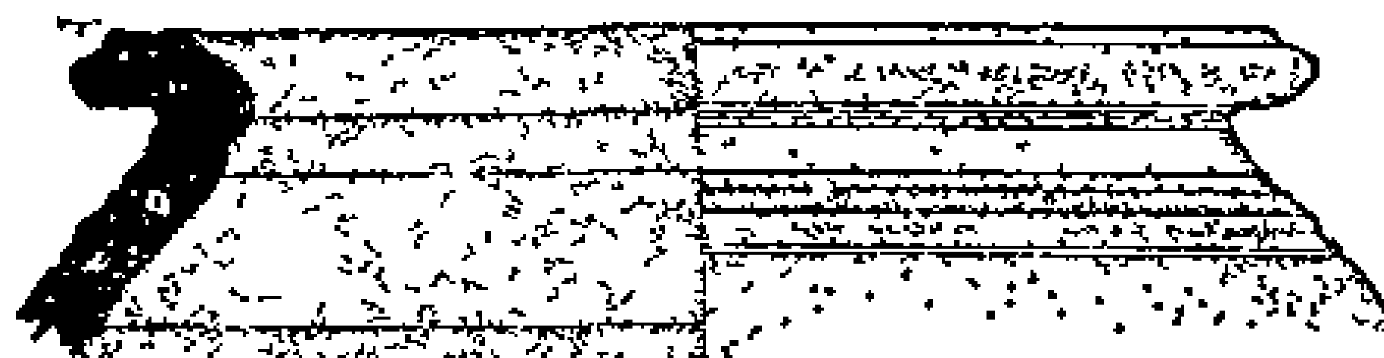


T. 119 a

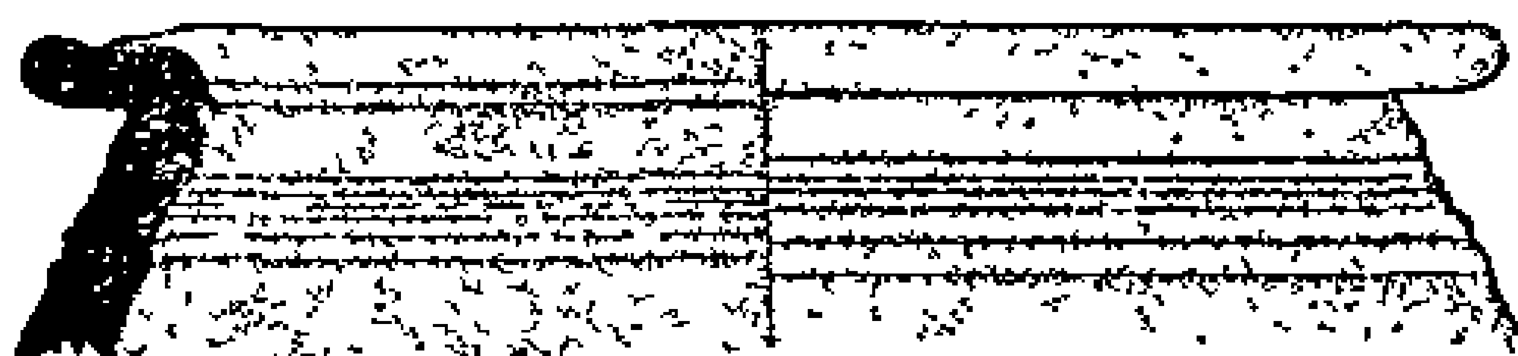




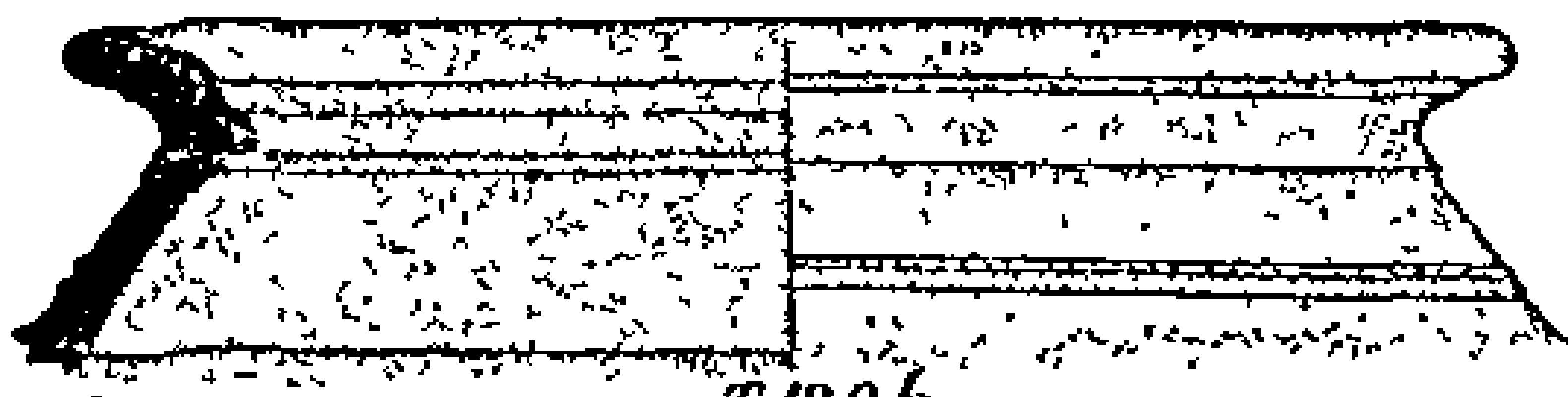
T. 119 b



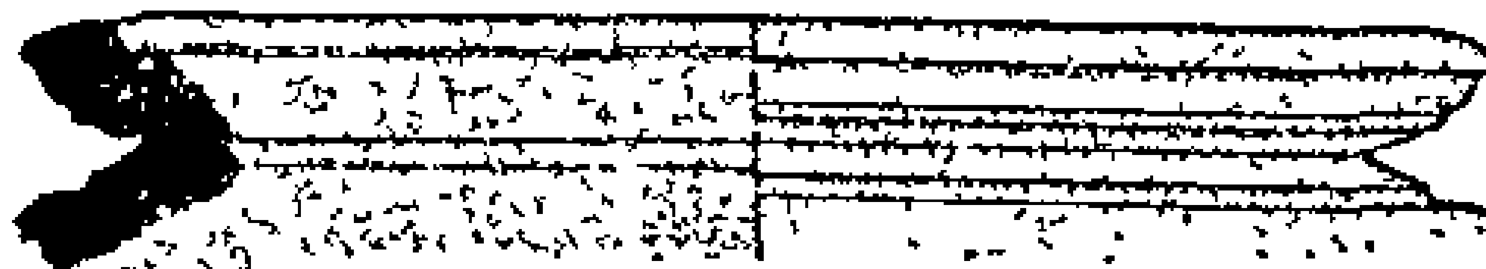
T. 120



T. 120 a



T. 120 b



T. 120 c



T. 121

Fig. 39 Types 118-121. Ordinary Black ware Short necked Vessels (Rims only) (See also Fig. 24. Type 40). Period IV.

(*See p. 79*)

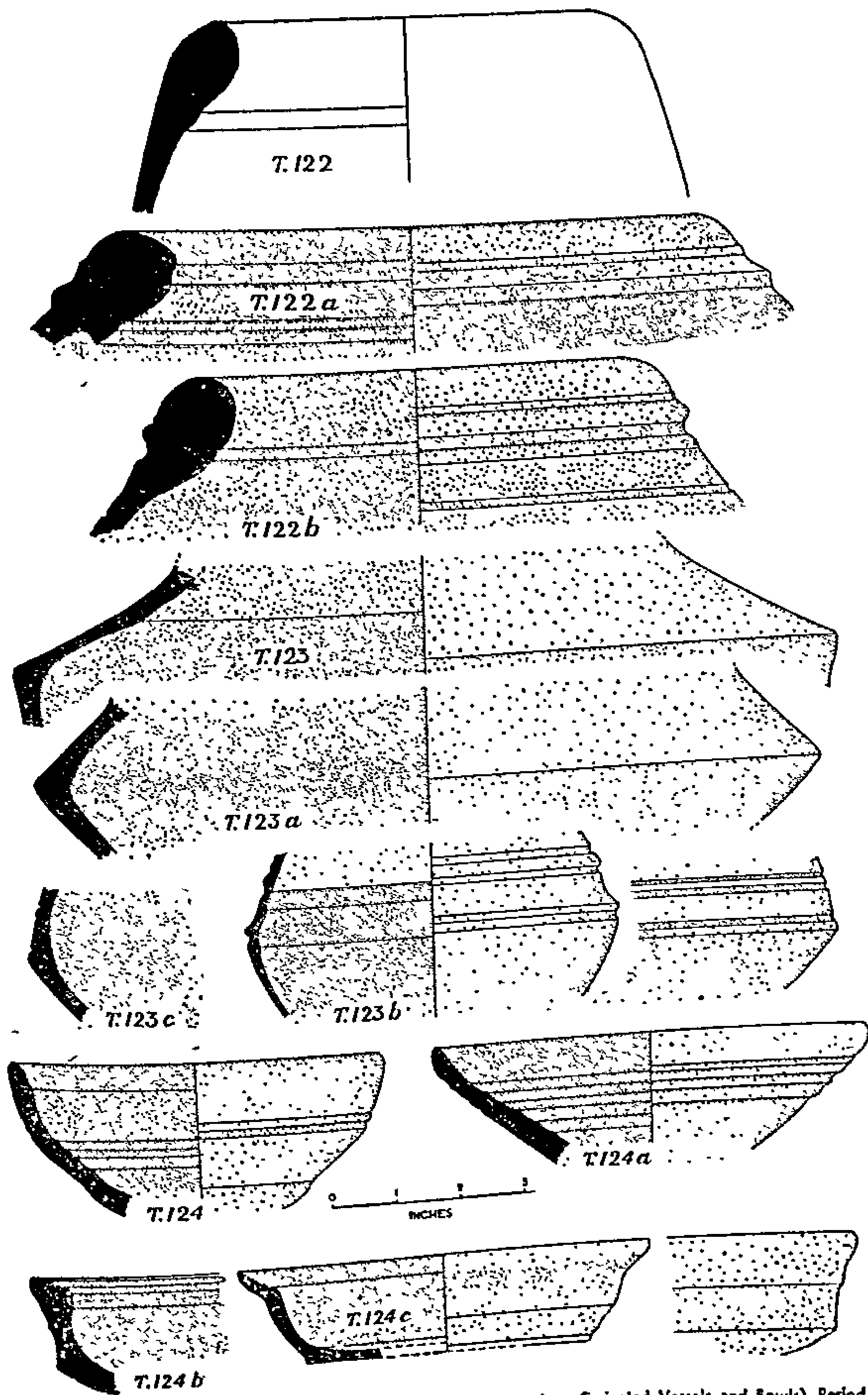
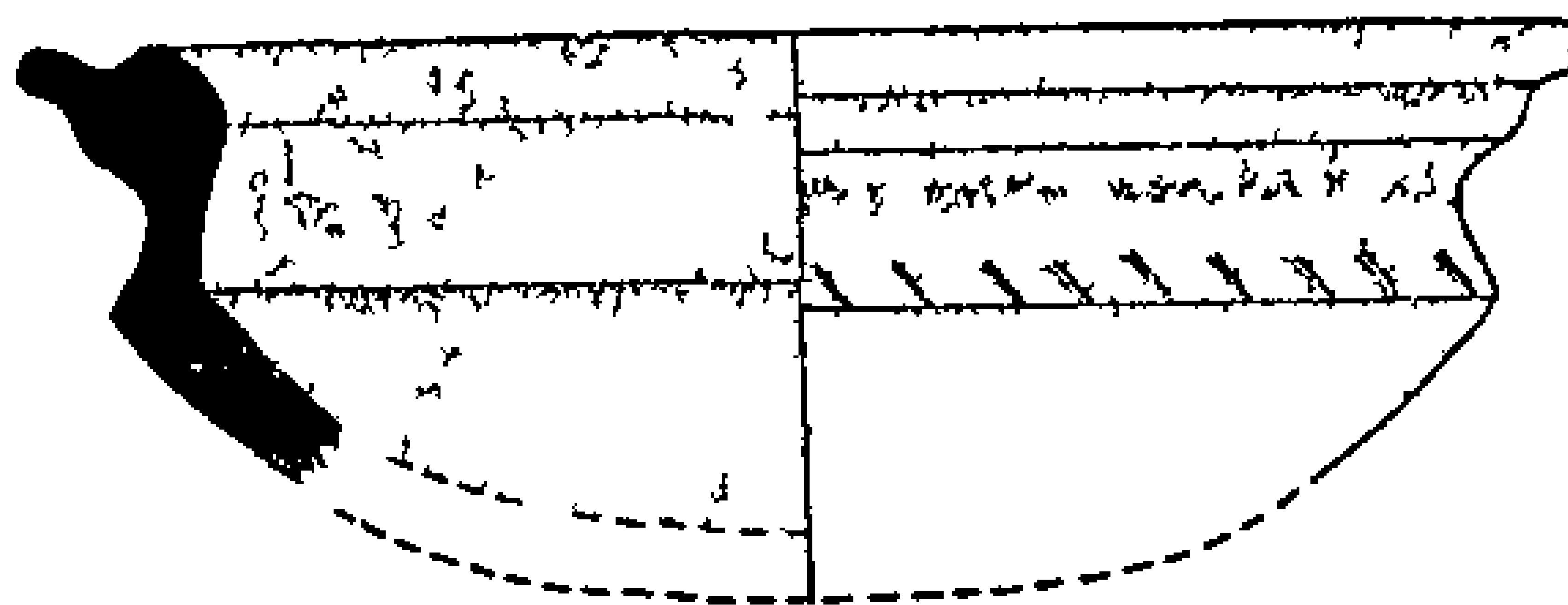
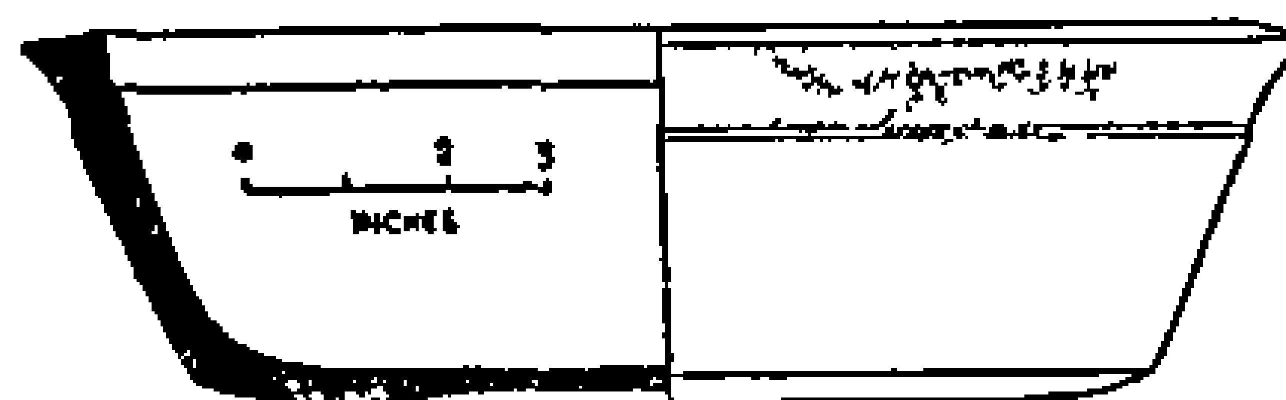


Fig 40. Types 122-124c. Red and Ordinary Black Wares (Storage Jars, Carinated Vessels and Bowls) Period IV.

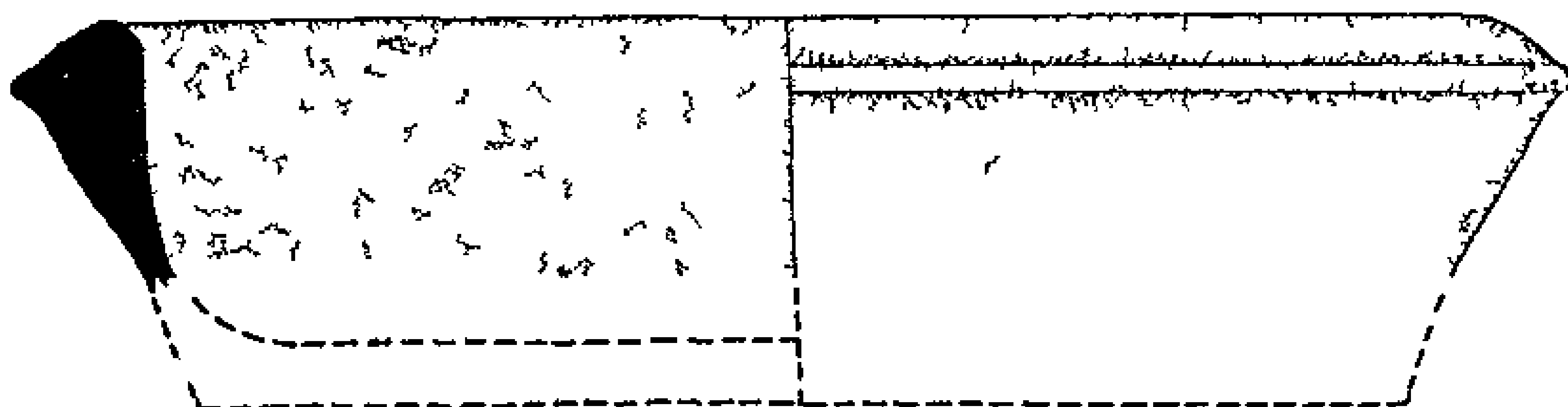
(See pp. 79-80)



T 125



T 126



T 126 a



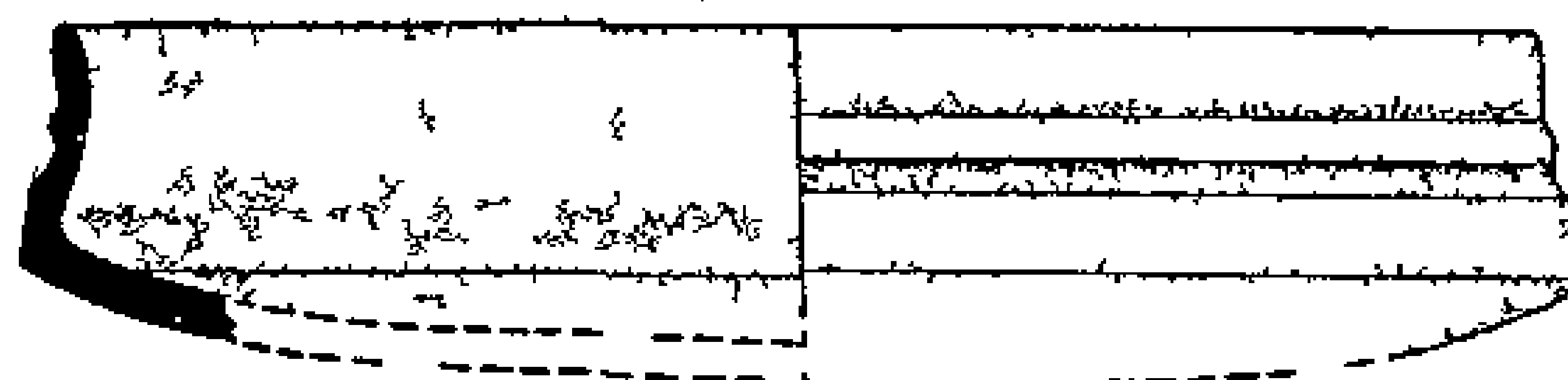
T 126 b



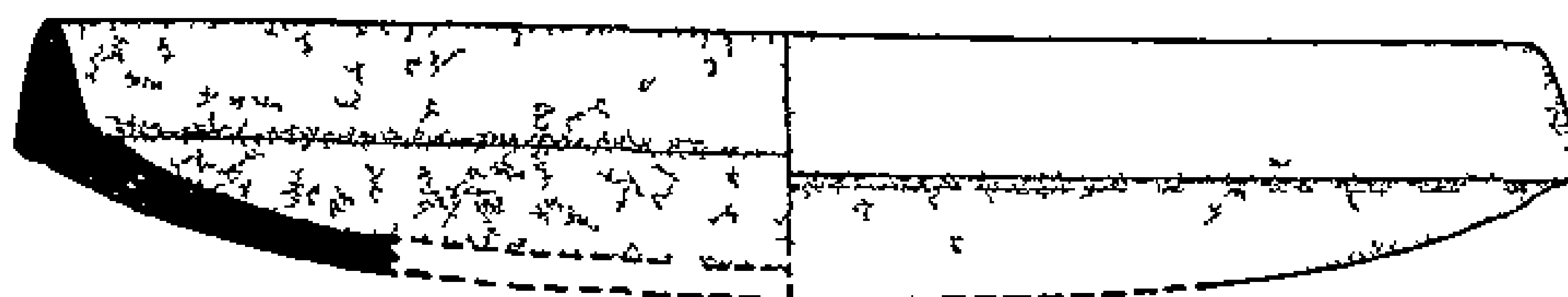
T 127



INCHES



T 127 a



T 128

Fig 41 Types 125 128 Carinated Bowls with a base Miscellaneous

(See p 80)

Fig. 39. (118-121)

Types 118-119

118 Fragment of a large vessel with everted rim Smooth outer surface No 2805, MG N C(3)

118a Fragment, short rim, rim as in 2805a No 2805b, MG N A(3)

119 Fragment of externally beaded rim, short neck, smooth polished surfaces No 2805a, MG N (3)

Types 119a-119b

119a Fragment, rim, everted, with a groove on its inner face No 2814, MG N D(1)

119b Fragment rim, everted and cut, with a shallow groove on its inner face No 2804, MG N A(1)

Types 120-120c & 121

120 Fragment, rim, short neck with everted rim and two grooves on its flat top No 2808, MG N C(3)

120a Fragment, short neck everted rim with a groove on its flat top and four grooves on the shoulder No 2787, MG N A(1)

120b Fragment, short neck, everted rim with a groove, carinated shoulder, crimson black surfaces No 2813, MG N D(1)

120c Fragment short neck, broad everted rim with two grooves on its inner face MG N A(1)

121 Fragment, short angular neck without grooves No 2845, MG N B(2)

Fig 40 (122-124c)

Type 122

122 This is a type again represented by a solitary sherd of a rim The edge is thick, but pointed because of bevelling from inside and outside Both surfaces were probably slipped, but the outside has a glossy, brownish appearance, while inside only the top of the edge has been made smooth N 2413a MG E N Ik(3)

Types 122a-b Rims of Storage Jars

No sherds of storage jars were found in Black Ware, except the two noticed here from MG N A(1) and MG E N

122a Fragment of a rim of a storage jar, having a thick raised band outside, round the neck and deeply cut on the underside, below the rim Very coarse surface No 8000 MG N A(1)

122b Fragment of a rim having a raised band outside, followed by a shallow groove, and narrow groove on the shoulder, plain inside No 8000c, MG E N (2)

Types 123-123c

123 Fragment of a vessel with angular belly, coarse fabric No 2821, MG N E(1)

123a Fragment of a vessel with angular belly Incised notches on its upper side Smooth outside coarse inside No 1822, MG N (1)

123b Fragment of a very thin walled vessel, having a round belly, but a series of raised concentric bands on the shoulder For some reason the sherd has crimson colour-spots on it No 2812, MG N D(1)

123c Small fragment of a carinated ware It has three grooves on its upper part The sherd is smooth black outside but coarse red inside No 1718, MG N G(1)

Types 124-124c

124 Fragment of a rimless bowl, with inturned side Very coarse surfaces No 6327, MG N A(3)

124a Fragment of a very shallow rimless bowl Very coarse surfaces No 2257, MG N. D(3)

124b Fragment of a bowl with a slanting top flaring mouth and a carinated belly. Extremely coarse from outside, having granulated base No 2894, MG N C(3)

124c Fragment, bowl having a flaring mouth, with slanting top Impressed thumb or dot decoration round the belly, and a very coarse but ring like base No 2785, MG N A(1)

Fig. 41. (125-128)

Types 125-128

125 Fragment, bowl with a lip (made by drawing out the clay when wet, with the thumb and finger), having thick, coarse walls with a broad, deep groove, and carinated shoulder, bearing oblique incisions A unique type at Nasik No 6912, MG E N Ie(3)

126 Rimless, flower pot—(*Kundi*)-like vessel with low, thick, out going walls, and broad flat base Coarse dirty brown surface, base extremely rough No 2004a, MG E N (2) [pl XIII 3]

126a Fragment, probably of a similar vessel as T 126 No 2004, MG N (2)

126b Fragment of a very shallow, *Kundi* like vessel, with flaring sides and a coarse base No 2868, MG N A(2)

127 Fragment of a rimless dish, with straight side, and rounded base Smooth black surfaces Perhaps the bottom was brownish No 2860, MG N A(2)

127a Fragment of a dish, with straight sides decorated with shallow grooves, rounded base Smooth black surfaces No 2662, MG N (2)

128 Fragment of a dish, with incurved side and rounded base, which is coarse black whereas the former is brown No 2794, MG N B(2)

INSCRIBED SHERDS

A few sherds were found from the middle and the lower layers of the two large trenches MG N and MG E N, which bear Brahmi-like symbols, and in some cases, definitely Brahmi-letters Some of the symbols, like the *svastika*, taurine, and *ma*-like figure, occur on Early Cast Copper Coins, in caves with or without inscriptions, and other early monuments, particularly Buddhist and Jaina The first two symbols, viz, the *svastika* and the taurine, figure in the Pandulena Caves, near Nasik. A study of *svastika* forms from there and elsewhere shows that the *svastika*

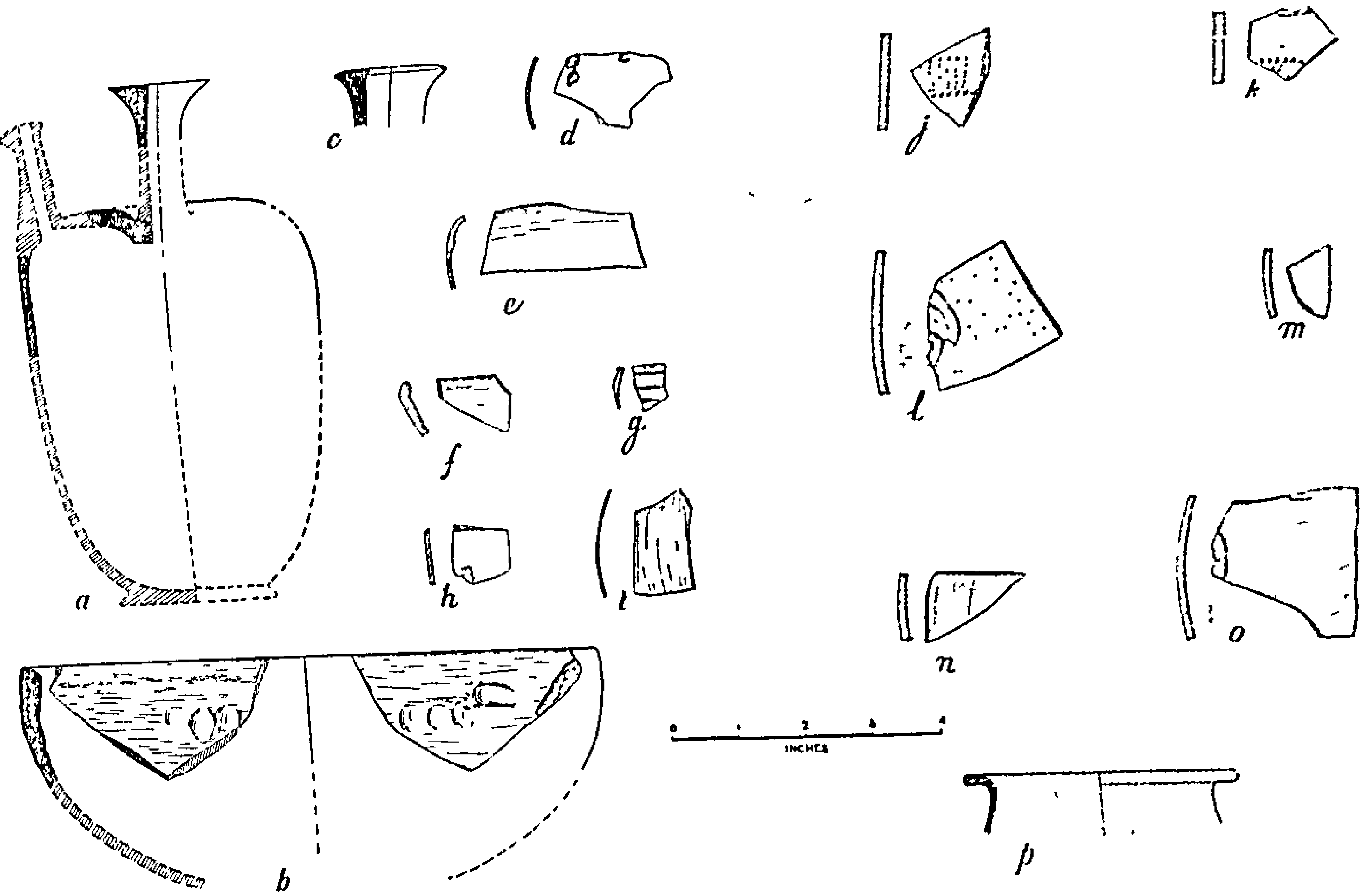


Fig 42 Red Polished (a-i) and Black Roulelled (l-p) Ware (Sherds).

(See pp. 69-70)

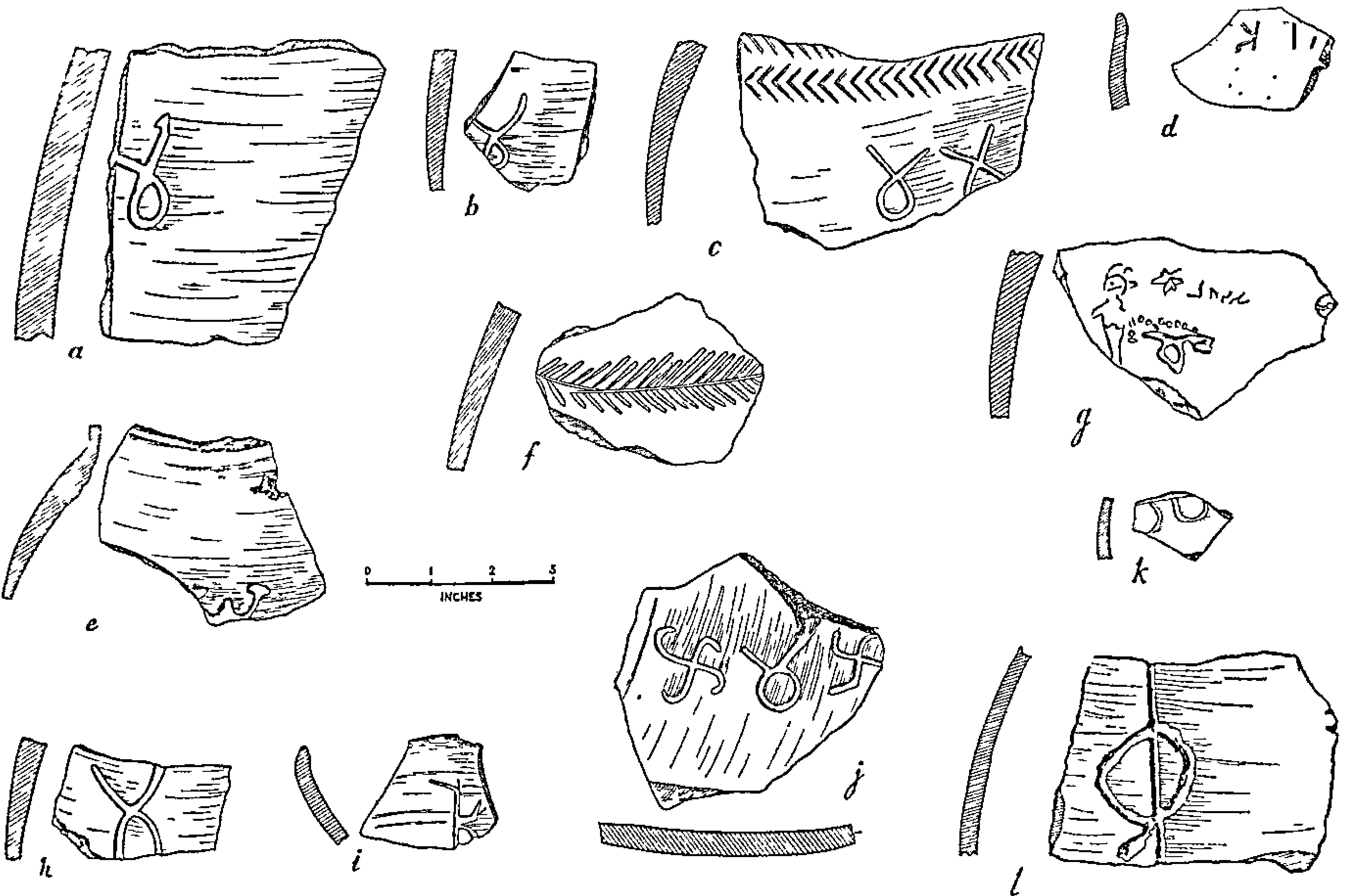


Fig 43 Inscribed Sherds (a l)
(See pp 80 82)

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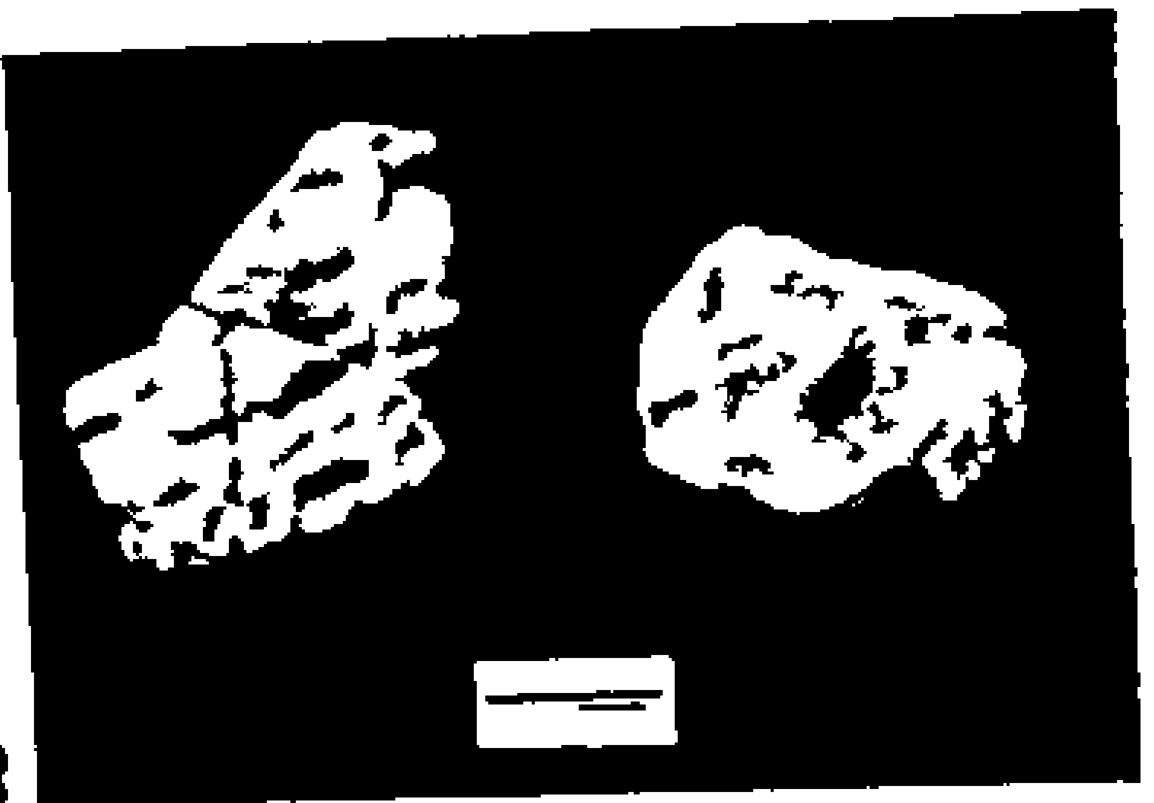

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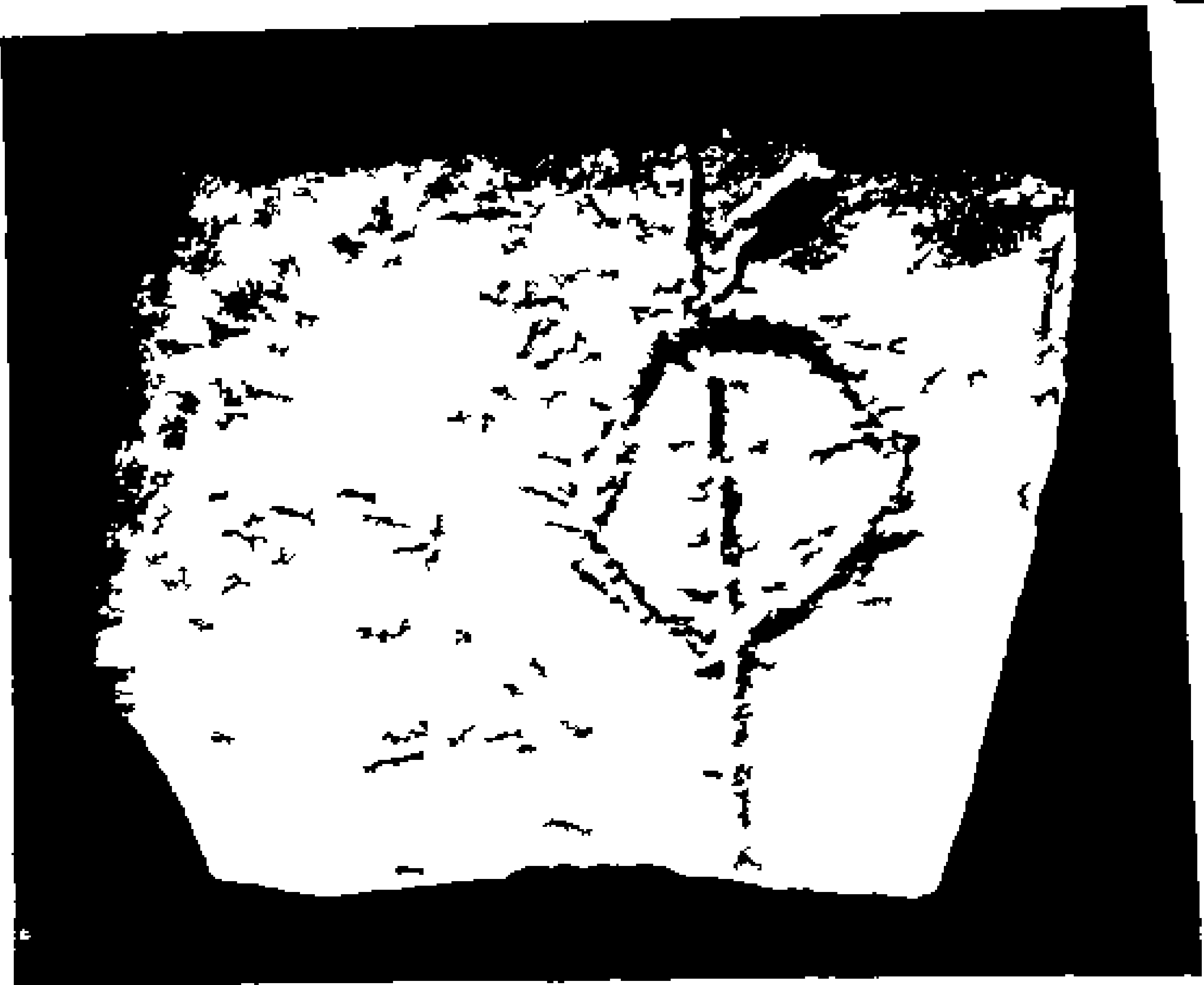

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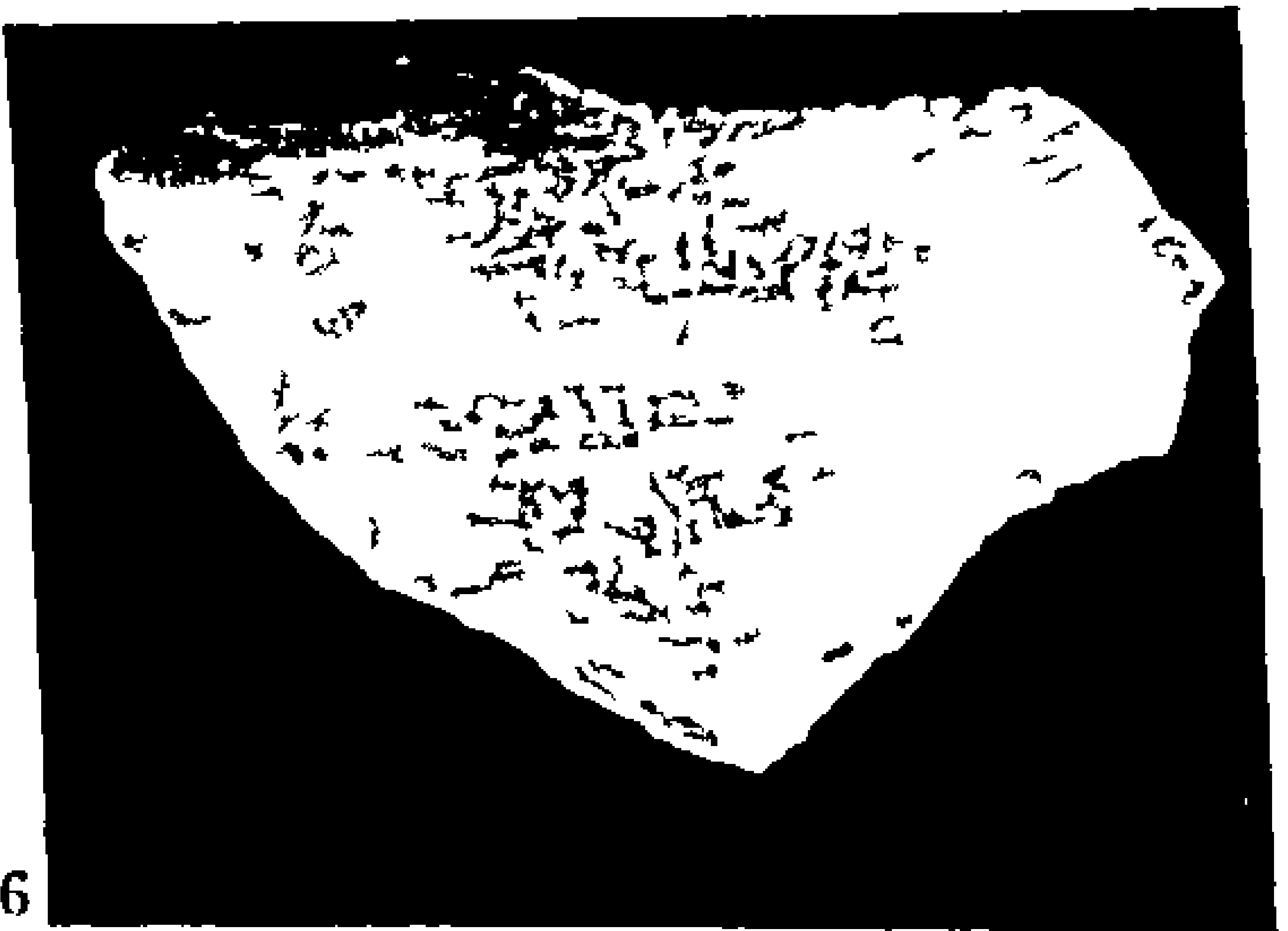


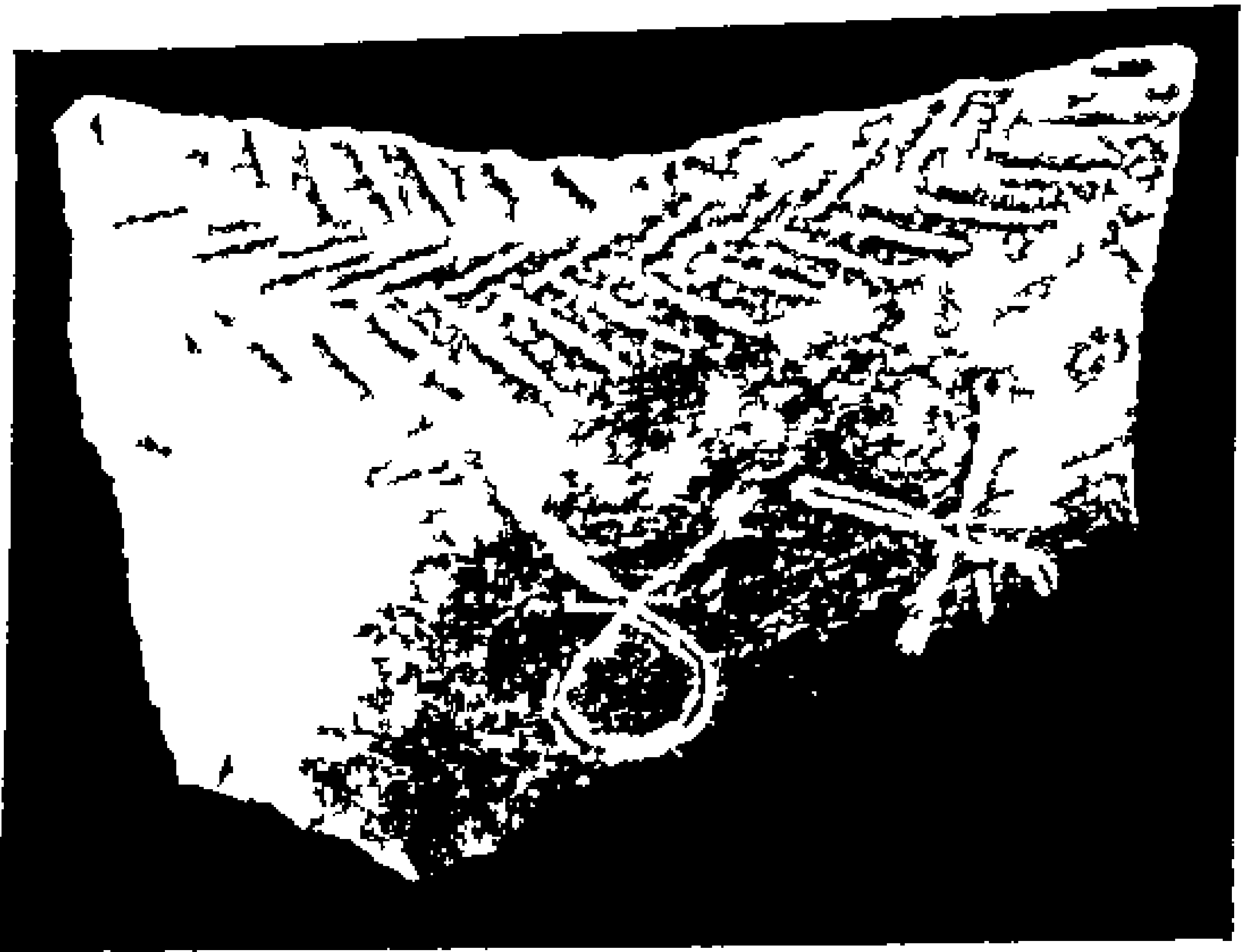
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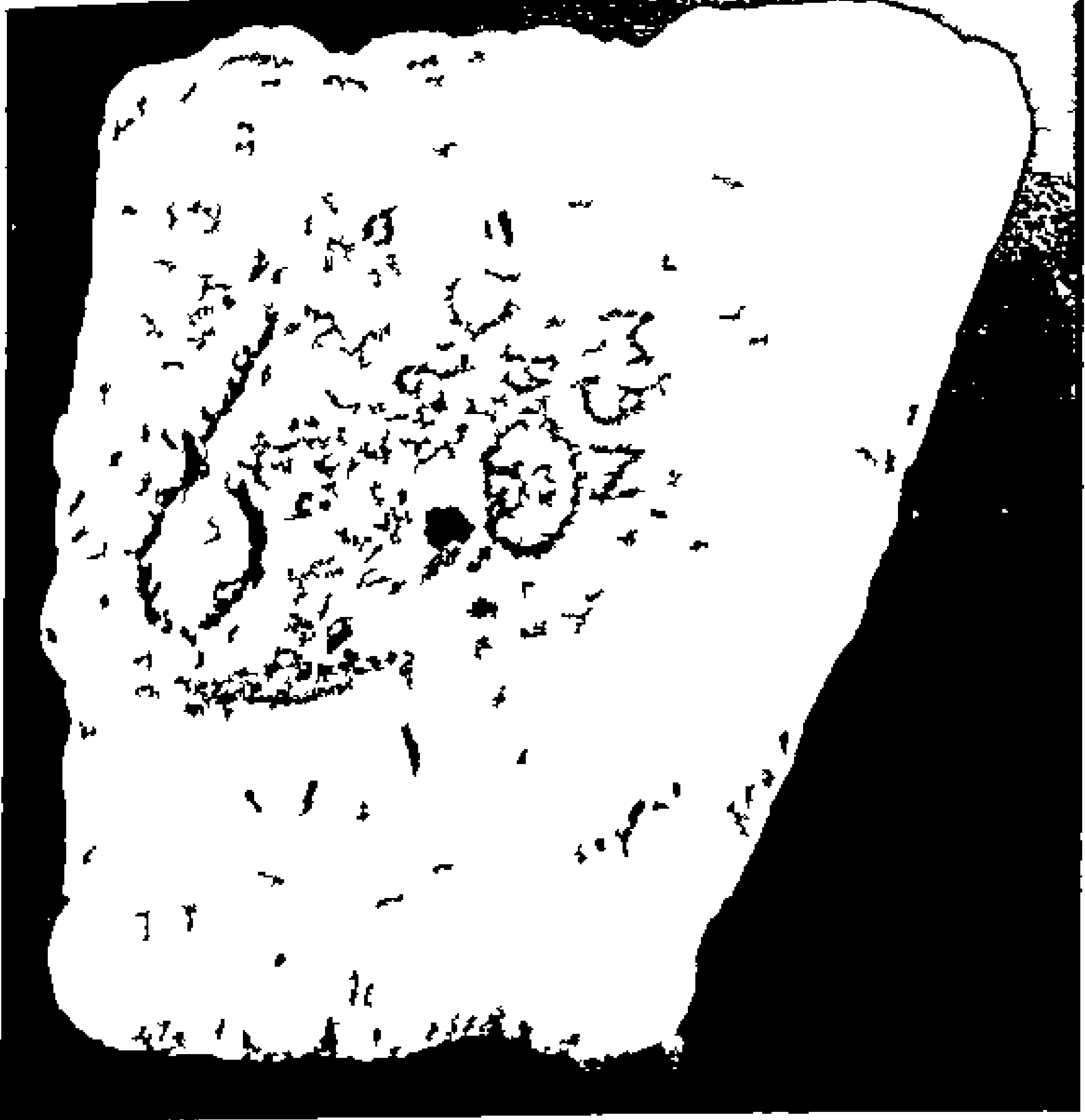

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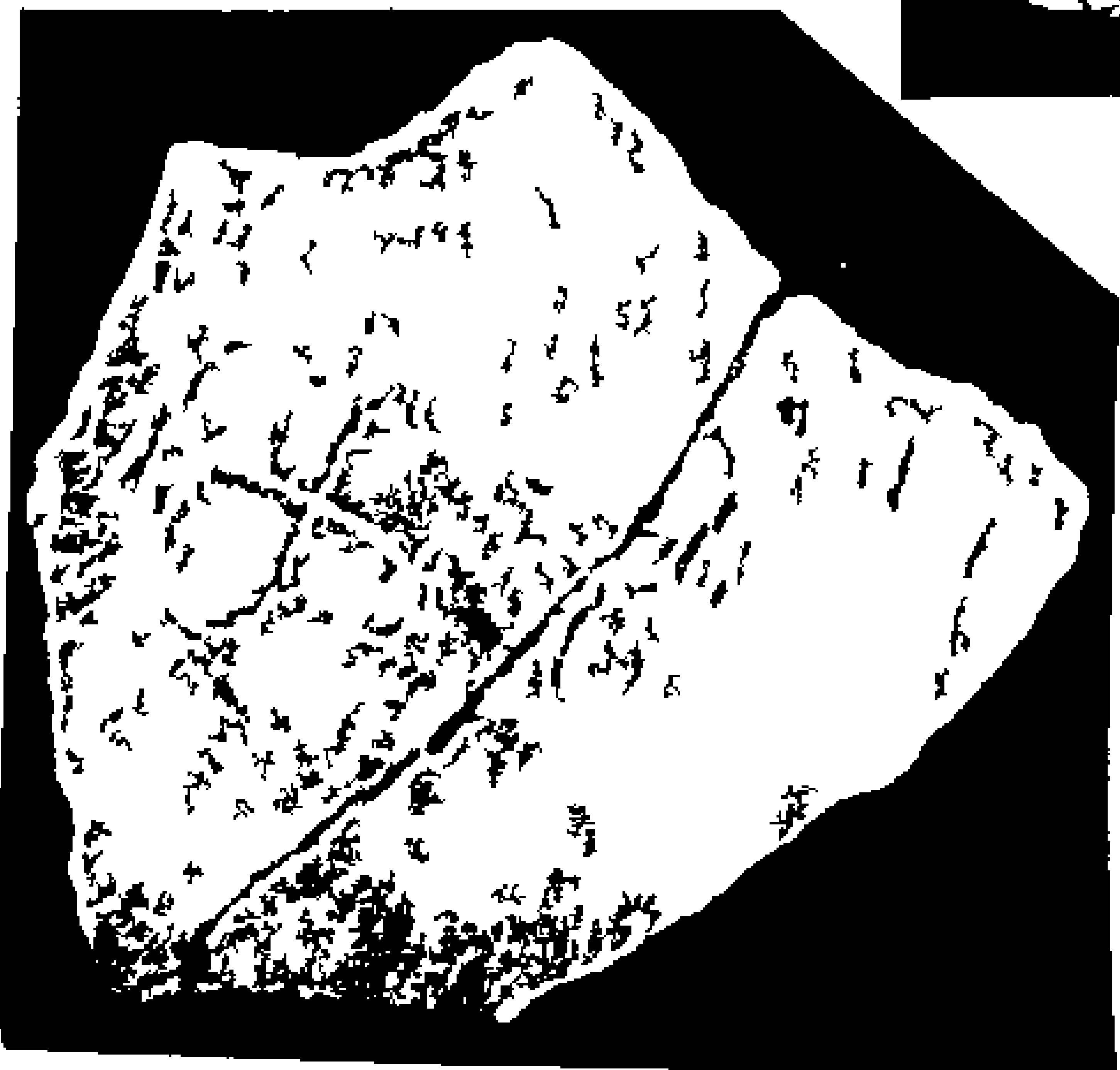
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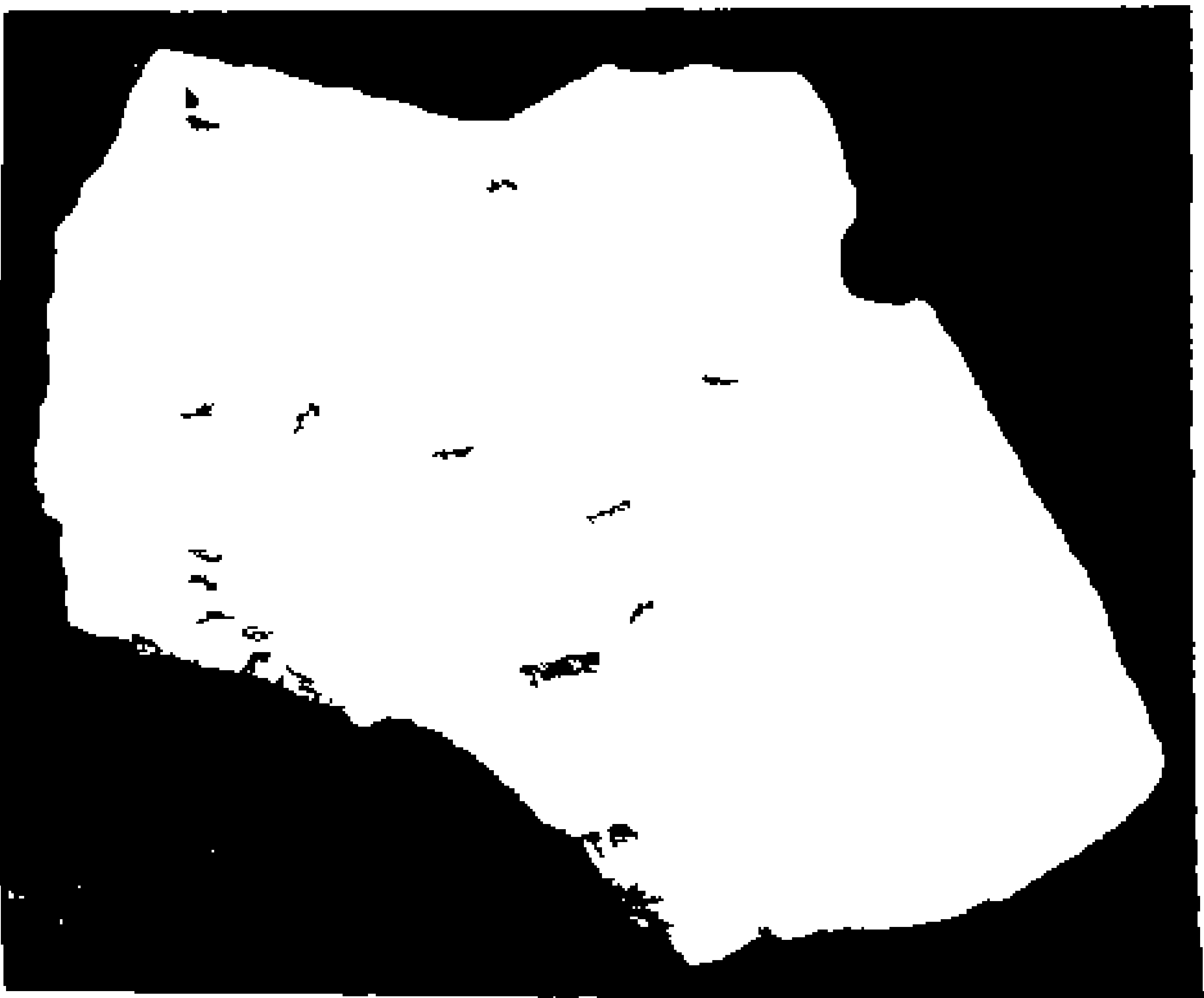
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with curved arm, is a feature of the pre-Christian period. One may compare in this connection the svastika appearing at the end of inscription of King Kanha, (Cave 19)[1], (dated 2nd-1st Century B.C) and those appearing later in inscriptions of Usavadāta and Pulumāvi. (Caves 10, 3)[2].

The same is true of the *ma*-like symbol.[3] It is definitely of the period before Christ. Later the lower loop of *ma* becomes angular.

The short Brahmi inscriptions on a few sherds are also in characters which can be dated between the 3rd century B C. and 2nd-1st century B C.

Thus from the evidence of symbols and Brahmi letters on potsherds the associated undisturbed layers may be put in a period from the 3rd 1st century B C.

Fig. 43. (a-l)

Inscribed Sherds

(a) Fragment of a large, thick walled vessel, probably storage jar, having a red slipped smooth exterior, and coarse, brown interior The former has a well incised symbol ɤ No 6451c, MG N B(2) (See also Pl XVII, 2)

(b) Fragment of a vessel, with smooth red exterior owing to fine red slip and smooth but dusty interior The exterior has the symbol ɤ No 693 MG S N (2)

(c) Fragment of a large globular vessel, red ware, having a coarse interior, but a smooth exterior, with remains of two rows of incised V decoration, probably round the shoulder, and two symbols ɤ ɤ No 6451a, MG N B(3) (See also Pl XVII, 1)

(d) Fragment of a rimless vessel, smooth black outside and inside Remains of three Brahmi letters as follows — (*A* or *ta ra* ?) or if we have it upside down then *ra ta* No 2029, MG N G(3) These letters show the characteristics at least of the pre Christian Brahmi[4] *A*, *ta*, *ra* Hence the sherd may be of the 1st century B C (See also Pl XVI, 1)

(e) Fragment of the shoulder of a globular vessel, with bright red, smooth exterior owing to the application of fine slip, coarse, dusty interior The exterior has the remnants of the Buddhist symbol ω No 6451 MG E N Ie(4)

(f) Fragment of a thick sided vessel with smooth red slipped surface, having an incised palm leaf like design, perhaps round the shoulder of the vessel On the inside the surface is extremely coarse and dusty in colour No 6249, MG N (3)

(g) Fragment of a vessel, dusty brown inside, polished red outside, owing to reddish slip and polishing The exterior surface has a number of engravings Among these,

---

1 *E.I.*, VIII, p 93, No 22 cf BURGESS, *Archaeological Survey of Western India*, (1882), IV, p 40, pl LI, Insc No 1

2 *Ibid*, pp 60, 65, 73 78

3 Cf also SIRCAR, Dines Chandra *Select Inscriptions bearing on Indian History and Civilization*, Vol I (Calcutta, 1942), p 183

4 Cf BUHLER, *Indischen Palaeographie*, Tafeln, (Strassburg, 1896), Tafel II

that on the extreme left seems to be a human figure Since it is incised after firing, it may be regarded as a graffiti Then there is some leaf or butterfly like figure, and to its right an inscription It reads "*Ni ga da* (*or la*) *sa*" "of Nigada (or la)"[1] The characters seem to belong to the 1st 2nd century B C Below a badly incised Brahmi '*ma*' like symbol, and some dots No 830 MG N D(3) (See also Pl XVI, 6).

(h) Small fragment of a vessel having smooth crimson exterior, and dusty interior Symbol on the exterior as in 4651a No 6451b, MG E N Ie(4)

(i) Fragment of a shallow dish, coarse brown exterior and interior, on the outside or the underside, if held with the base of the vessel on the top the letter ꟸ But if held in the reverse fashion then K The former is more probable, and the letter may be Brahmi A[2] It is deeply incised No 172, MG N A(4)

(j) Fragment of a vessel coarse, dusty brown inside, smooth red outside because of fine red slip and bearing the symbols 卐 ȣ 卐 Similar symbols occur on Cast Uninscribed and Inscribed Copper Coins, and in early Buddhist Caves No 848, MG N E(5)

(k) Fragment of a black and red ware with extremely smooth polished surfaces The outside has the remains of letters (or symbols o o, probably, remains of a Brahmi '*ma*' of the early type or, if intact the letters *tha* The former is more probable No 205, MG N B(5) (See also Pl XVI, 2)

(l) Fragment of a vessel with smooth red exterior and very coarse brownish interior. The former has a well incised circle, with a loop at the bottom turned towards the left (or if turned upside down, the loop will turn to the right) This circle is cut by a deep vertical line though not in two equal halves If a Brahmi letter, it would read '*chu*[3] No 4614, MG N C(5) (See also Pl XVI, 5)

Inscribed Sealing

Terracotta

A round plano-convex sealing (No 672) was found from MG S N, layer 2 It is made of brownish clay and imperfectly fired The letters '*dha ma sa*' ("of religion") are inscribed twice from left to right and right to left in such a way that it will read, if half of the seal is impressed first, and then the second half, as *dha ma sa, dha ma sa* Or if the whole is impressed at a time, then one may read *dha ma sa* either way [Pl XVI, 4]

Since the *ma* has become angular and as the *sa* has well developed loops, palaeographically, this sealing may be placed in the 1st-2nd century after Christ

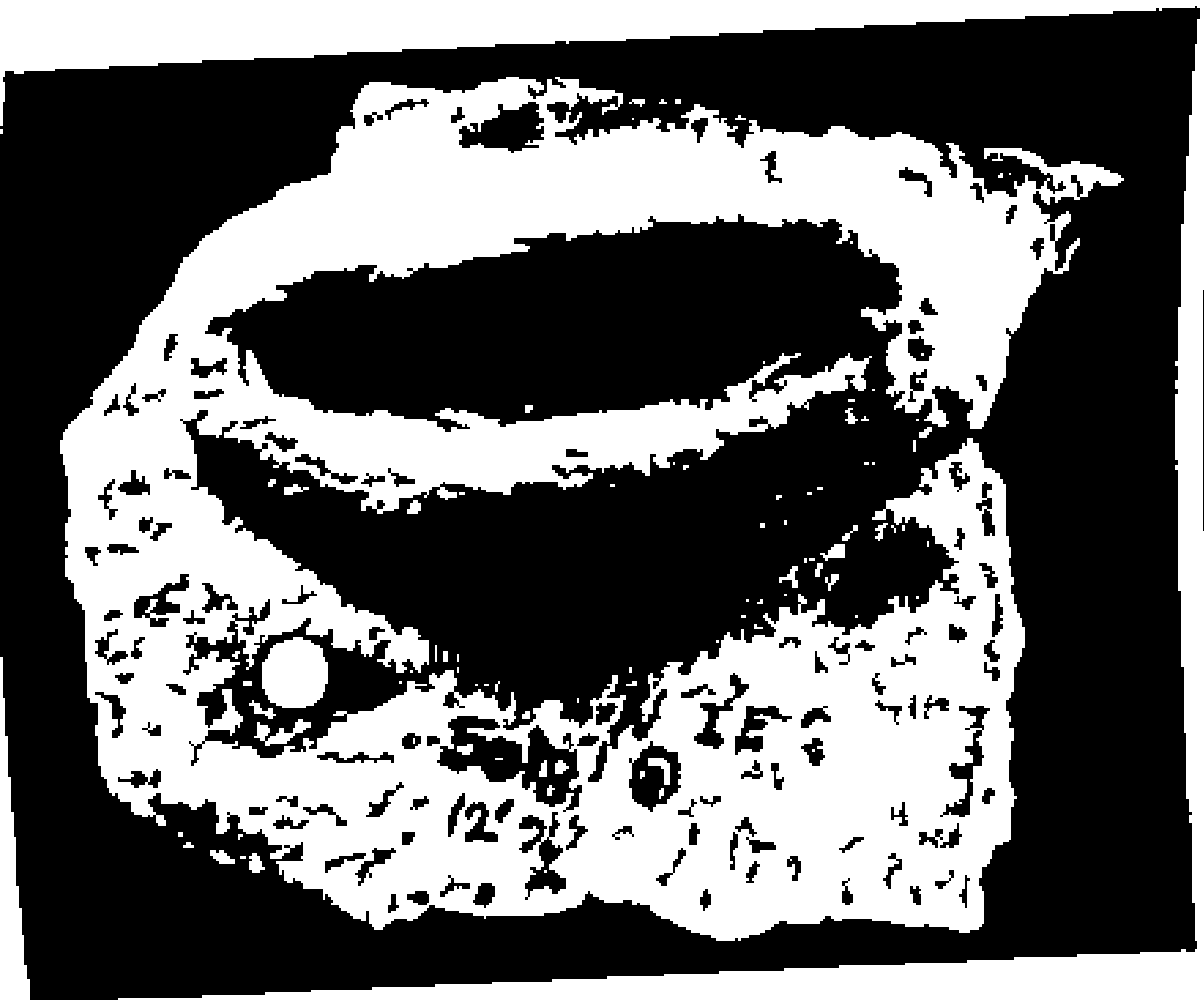
Shri Lakshminarayan Rao Superintendent for Epigraphy however, says as follows

"The characters of the seal appear to be later and may be referred to the 1st century A C I am not sure of the *dha* on the seal If the symbol, occurring twice, which is read as *dha* is left out the inscription seems to read *Sema Sema* or *Sama Sama* Sama is one of the 1000 names of Vishnu'

1 We are indebted to Dr Chhabra and Shri Lakshminarayan Rao for help in reading the inscription

2 Buhler *op cit* Tafel II Column XXI (from Hathigumphā)

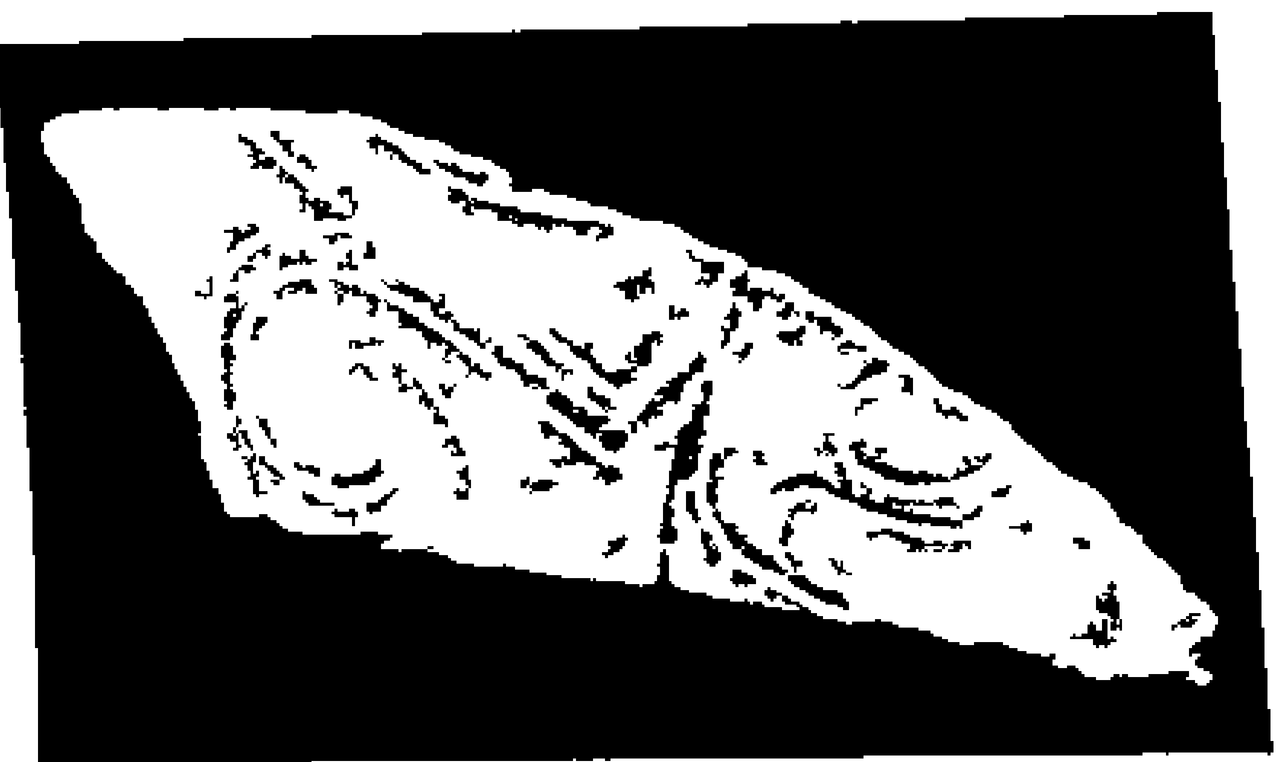
3 *Ibid* Column X (from Girnār)

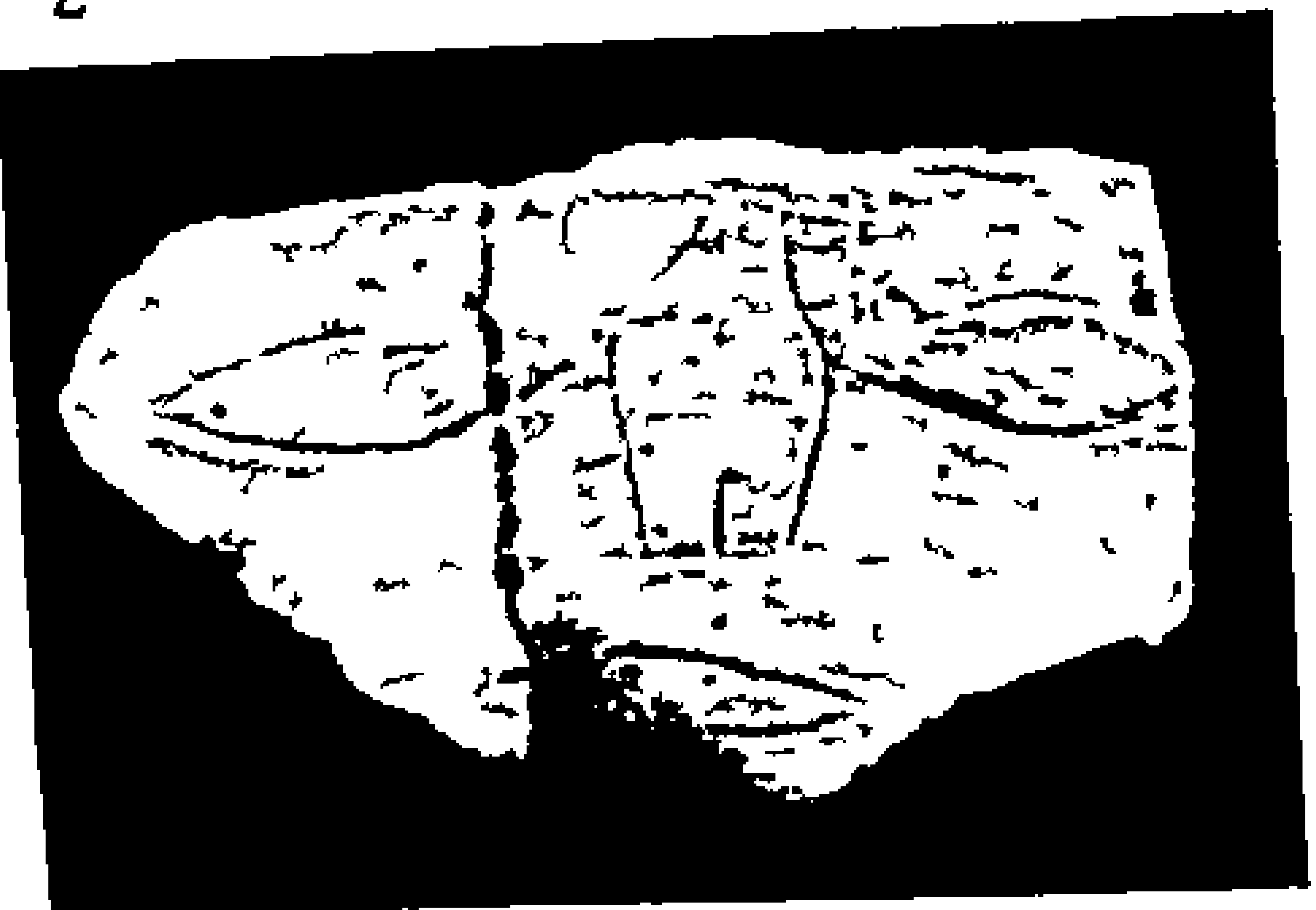

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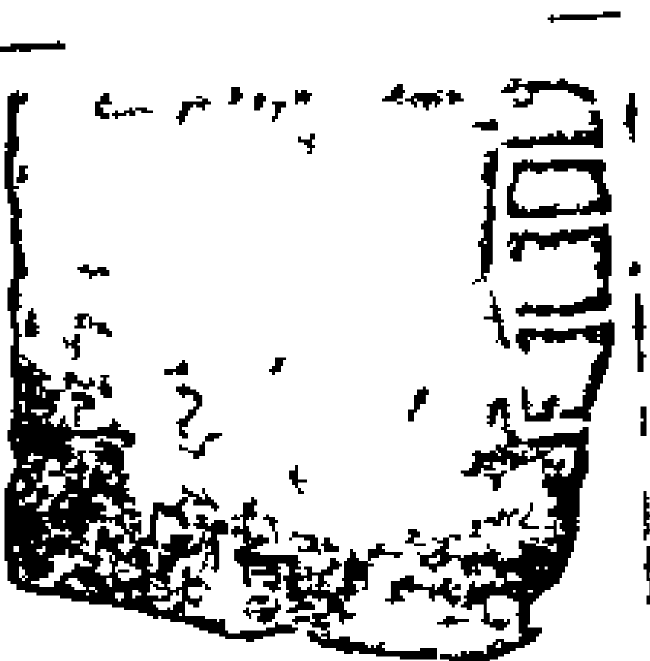

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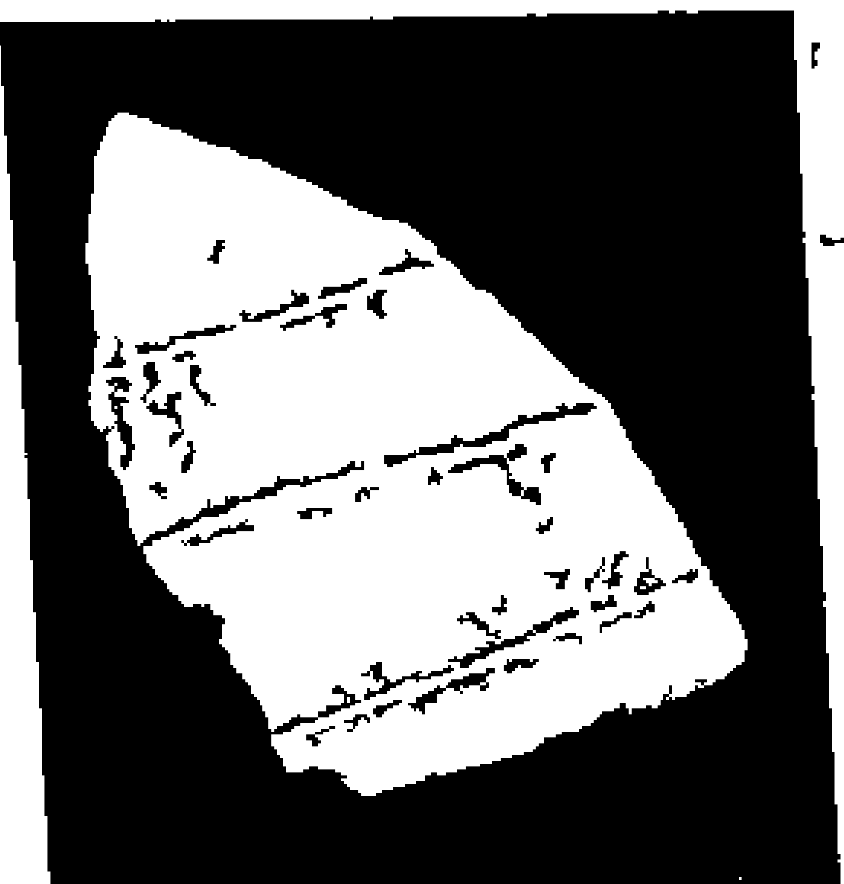

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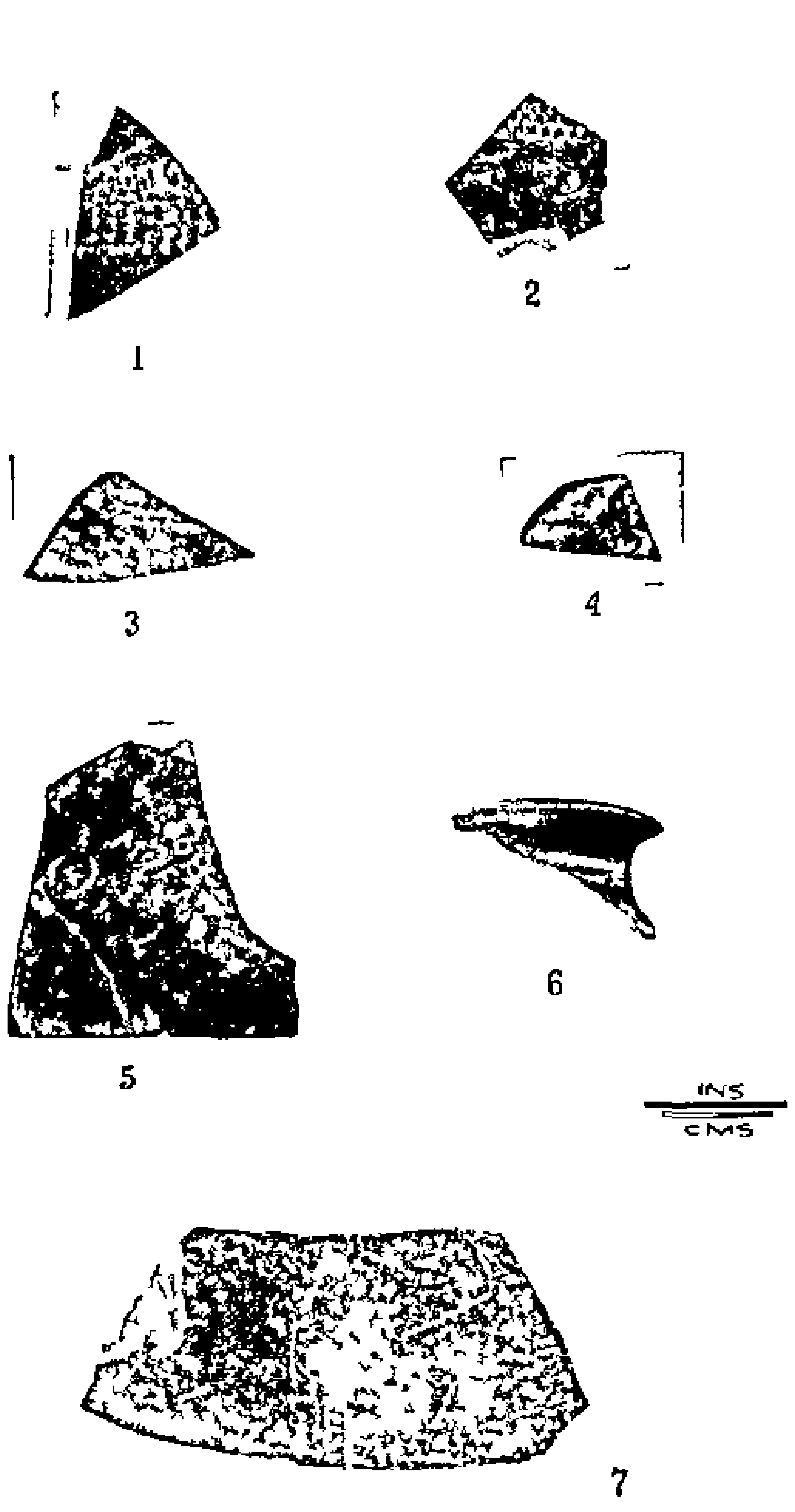

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18

I am not sure but to me it appears that the symbol which you read as *dha* is only a representative of the moon, and the two letters may have to be read as *soma* Both the moon symbol and the word *soma* occur twice *Soma*, as you know, means 'moon' The whole may have some magic import!"

I had occasion to show this seal to Dr H V TRIVEDI, Curator and Assistant Director of Archaeology, Madhya Bharat He also, independently read it as I have done It appears to me that Shri Lakshminarayan RAO's reading is farfetched

DECORATED SHERDS (Fig 44, a m)

(a) Fragment of a thick walled vessel, coarse, brown outside, but inside it was originally polished black and ornamented with an incised design No 883, MG E N [pl XVIII, 8]

(b) Fragment of the middle portion of a cylindrical vessel having a thin reddish slip outside but coarse dirty brown inside On the outside are incised two elongated lotus bud like eyes the tip of the nose with nostrils and mouth No 775 MG N D(4) Period IIB [pl XVIII 6]

(c) Fragment of a vessel with thick walls, having polished light red slipped exterior and smooth tannish interior The outside has an incised decoration of which volutes and part of a straight line are now extant No 5018d, MG E N (4) Period II III [pl XVIII, 5]

(d) Fragment of a thick sided vessel with bright red slipped surface decorated by incised lines forming irregular rectangles The underside has no slip and is coarse and dull brown in appearance No 6248 MG N D(3) Period IV [pl XVIII 9]

(e) Fragment of dish having smooth black surfaces The outer has remains of an incised square or rectangle which was further subdivided into smaller squares or rectangles No 5125c, MG N A(4) Period IIB [pl XVIII 7]

(f) Fragment of a vessel with medium thick wall having a fine red slip over an orange coloured surface which shows a series of close horizontal striations Further decorated by three horizontal incised lines and one vertical No 5008 MG E N Ie (3) [Cf No 6248, MG N (3)] [pl XVIII 11]

(g) Fragment of a coarse thin pale red vessel with a decoration of small oblique incised strokes The latter seems to consist of at least three (central) concentric circles surrounded by a circle of broad V shaped petals (?) containing two vertically incised lines (?) No 7012 MG S N (2) [pl XVIII 12]

(h) A similar sherd No 5018c from MG E N has identical decoration showing one full rosette with 9 petals and one half separated by a line consisting of one round and oblong bead like object No 5018c MG E N Ie(3) [pl XVIII 4]

(i) Fragment of a vessel having thick sides polished (or burnished) black surface decorated with raised band and impressions of half rosettes of five petals The inner side is very coarse and uneven No 5018b MG N E(5) Period IIA [pl XVIII 3]

(j) Fragment of the lid of a Kaolin Ware It is concave from inside and on the outside has a raised decoration This had two concentric rings one on the lower periphery of the circumference ornamented with leaves and buds and the other above it This has now extant the lower part of an elephant's bent leg No 3 MG N A (1) Though almost from the surface the sherd seems to be of the early period when such decorated vessels were common [pl XXIV 5]

(k) Small fragment of a lid of Kaolin extremely well fired The upper surface is smooth owing to polish and has remains of fine narrow grooves The underside is also smooth and exhibits a part of the inner ledge of the lid No 206 MG N C(5) Period II A [pl XXIV, 4]

(l) Fragment of a vessel having smaller ovals and smaller eye ball like impression within it No 5018a Unstratified [pl XVIII 2]

(m) Fragment of a very thicl walled vessel having a coarse red slipped surface and very coarse blackish inner surface The former has a raised decoration with a deep elongated oval eye like depression No 5018 MG E N Ie(3) [pl XVIII 1]

No 488 Small sherd of an ordinary blackish red vessel having a coarse surface and very coarse light brown unslipped interior This is held by an iron clamp pinned with a copper (bronze) pin MG N (4) 7 ft 8 in Why such an ordinary coarse vessel should receive this treatment or be prized cannot be understood [pl XXVI 9]

Specialized Wares [Figs 8a, 37 and pl XIV]

No 8002 *Only fragment of a vessel with a short everted neck Cf T 9 in Red Ware* MG N (4) The surfaces are coarse but covered with mica MG E N Ik (3) (Fig 37 T 108a)

No 6600 Upper half of a vessel red ware having a small beaded rim with an arrow like (graffit) on the shoulder MG S N (Fig 8a 1)

No 6585 Remains of a globular vessel tan ware having extremely polished thin egg shell like walls Partly reconstructed No 6585 MG N E(5) well (Fig 8a 2)

No 183 A vessel probably imitating a complete coconut shell in shape as well as in its external surface which is roughly incised It has a narrow bottle like or *Kujah like* neck smooth darl tan in colour and probably handmade MG N C(4) [pl XIV 3] Fig 8a 3

No 5065 Remains of a globular part of a multi spouted vessel Coarse red ware It appears that the spouts were prepared separately and affixed on to the pot A hole was then bored in the pot from the underside to connect both the surfaces MG E N (2) [pl XIV, 1]

Painted Pottery, Periods II IV [pl XX]

Only seven sherds of painted ware were found from the middle and lower layers belonging to Periods II-IV respectively Of these, two came from MG N (5), two from MG N (4), one from MG N N (2), and two from K W N (1) and (X3) Excepting two, one from MG N (5), and the other from K W N (1), there is no resemblance between others, and we cannot speak of the Painted Pottery of Period II or Period III-IV The sherds seem to be intrusions and are not suggestive of a local Painted Pottery Culture This is particularly true of the two painted sherds from MG N (4) These remind one of the Andhra Painted ware from Brahmagiri and Chandravalli[1] and other sites in Karnatak Because of its association with the rouletted ware, it is dated to the 1st century A D [2] We may, therefore, keep the lower limit

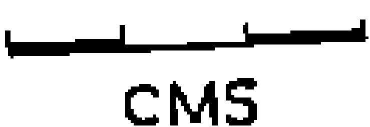
1 *Anc Ind* No 4

2 *Ibid*, p 236


1


2


3




4


5


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7


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12

Pa nted (Nos 1 3 6 9 10) Glazed (4 5) and Celadon (7 8 11 12) Wa e Pe od III IV (See 3 p 8o 86)



2

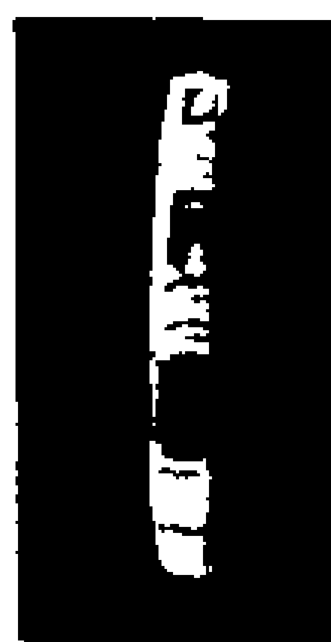


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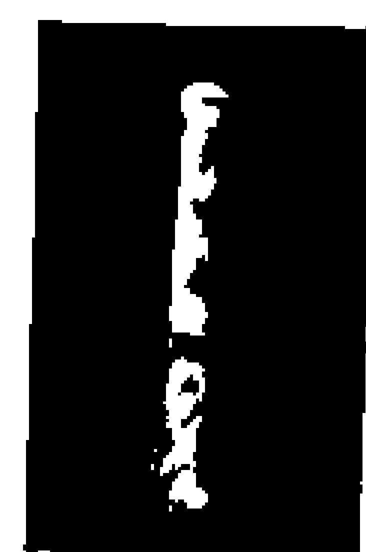
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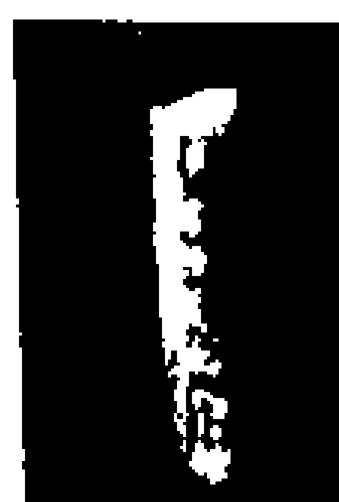
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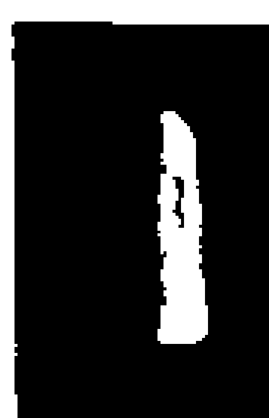
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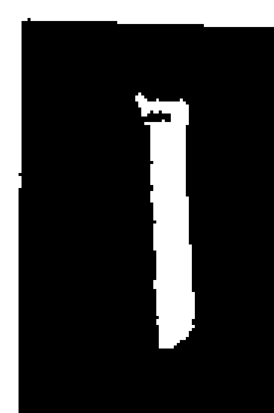
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11



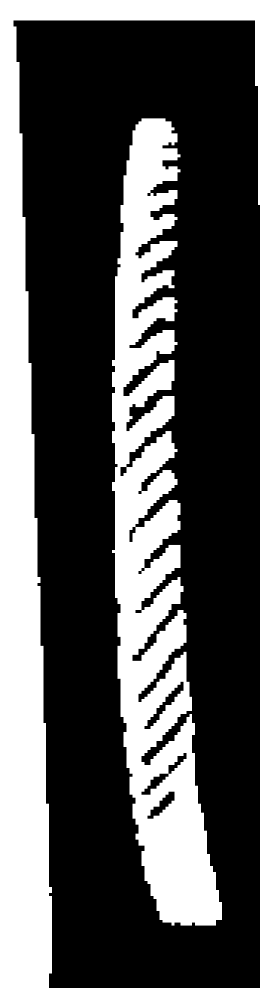
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17



18



19

Copper ring (1) Crystal Pendent (Lion) (2) Gold bead (3) Glass bangles (4 10) Conch shell bangles (11 19)

(*See pp* 96 98)

of Period IIB, (layer 4) as this, and assign the period to three centuries, 1st century A.D.—1st-2nd century B.C.

Painted Sherds, Period IIA

Only two fragments of painted ware were recovered from layer 5 and one from layer 4 The first is of a small high necked globular vessel The rim is not very high, it is slightly flaring Below it and the shoulder there is a raised band Inside, traces of three corrugations remain on the globular portion The fabric is of coarse, gritty clay and not well fired the rim portion and parts of shoulder are greyish, while the rest is dull brown Probably a white paint originally covered the entire vessel, but there are patches of black over the globular portion Before putting on this paint, a thick band either of clay or the paint was put on either side or four sides of the vessel, dividing the surface into four equal zones Superficially, this looks as if the pot was made into halves No 2 and 4 MG N C(5) From the well [Fig 8a, 4]

No 239 Fragment of a semi thick walled vessel, having a coarse, uneven dusty, brown interior and a smooth polished self covered slip painted with strokes of a darker chocolate shade The clay is gritty, full of sand, and the uneven inner surface suggests that it might be hand made MG N A(5) [pl XX, 9]

Period IIB

No 674 Fragment of a thin walled vessel, having a greyish, coarse, uneven interior, and a finely polished glossy reddish yellow exterior, due to the application of a reddish slip over the red, well burnt exterior This seems to have been further painted with yellow oblique strokes as in Andhra pottery from Karnatak and Mysore MG N E(4) [pl XX, 3]

No 674a Fragment, similar sherd MG N E(4) Not illustrated (Cf *Anc Ind*, No 4, p 236ff)

No 715 Fragment, probably rim portion of the lid, of a fine red ware made of a well levigated clay (Kaoline ?) and uniformly baked Over this there is a thick coating of white paint, further painted over by dark red and light orange bands The orange bands enclose a beautiful scroll pattern (or duck or swan or serpent head, and dots) MG N N (2) From the debris over the Early Brick Structure [pl XX 6] (Cf Similar designs in Ajanta Paintings)

No 97 Fragment of a vessel of semi thick walls having a dusty brown interior and a smooth, polished exterior, perhaps having a self covered slip Over this are painted in darker chocolate shade vertical and horizontal lines The clay is gritty and full of micaceous sand Though the surface is flat there are no wheel marks The fabric and painting resemble most closely sherd No 239 from MG N (5) Hence probably it belongs to Period IIA K W.N (1) [pl XX, 10]

No 81 Fragment of a vessel of semi thick walls having a coarse red interior covered by a white substance The surface has a bright red slip This has a thin horizontal applique band in white patches of the same substance as that which covers the interior K W.N (X3) Probably of Period IIA [pl XX 2]

No 887 Fragment the base of the neck of an extremely thin walled (2 mm thick) vessel having a fine burnished chocolate coloured surface Round the neck and just below it there are traces respectively of thin and thick oblique black bands On the inner side the surface is of dark chocolate hue with close grooves indicating that the vessel was made on a fast wheel No 887, MG E N Ie(3) [pl XX, 1]

Period IV

Glazed and Chinese (or Celadon) ware

A few sherds of Glazed and Chinese (Celadon) ware were found from the upper layers of MG N and MG E N, and thus naturally belong to Period IV In the absence of coins, these sherds help in assigning the later sub-phases or this period to the Early Muslim contact with Nasik

Celadon Ware

In the Celadon ware [pl XX, 7, 8, 11, 12] there seem to be three main types, as distinguished by colour decorations

(a) Decoration in navy blue over an azure or light greenish blue surfaces
No 6201a [pl XX 8]
No 6201 MG N C(1) Not illustrated
No 5039 MG E N (1) Not illustrated

(b) Decoration in blue as in (a) over the upper surface, the under surface being of chocolate colour
No 6062 MG N A(1) Not illustrated

(c) Paintings in green chocolate or blue over a whitish surface
No 6191 MG N C(1) [pl XX 7]
No 863 MG E N (1) [pl XX, 12]
No 6197 MG N C(1) This has probably a Chinese letter on one surface

The paintings seem to include plants, flowers and fruits (?)

The pottery shapes represented are bowls or dishes with a ringed base, and a thin plate with a wavy surface and outline

Glazed Ware

Of this ware, three sherds were found in MG N, one in MG S N, and three in MG E N The glaze is wearing off in almost all cases It consists of a yellowish white surface, with paintings in light or dark blue or at time fine lustrous smooth green over a sandy surface [pl XX, 4, 5, 11] The paintings seem to contain geometric and bird motifs, whereas the sherds are of ringed bowls and dishes

VII

BEADS

The yield of beads at Nasik was not much In all, 160 beads were found in various trenches as follows

MGN 138 MG E N 7 MG S N *Nil*, MG N N 1, K W N 5 and unstratified or unnumbered 9

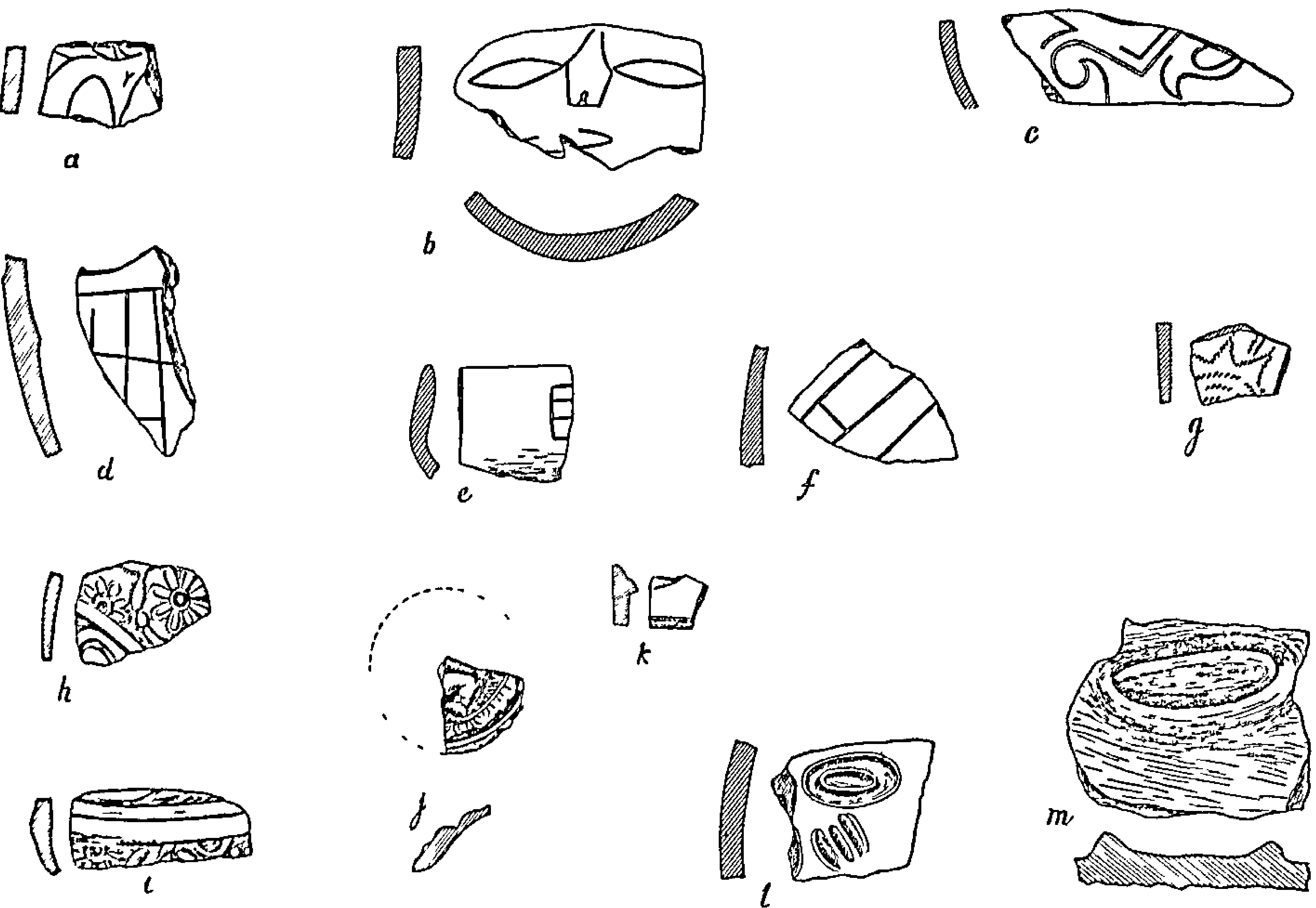


Fig 44 Decorated Sherds: Incised (a g and k) Embossed (h i m)
(See pp 83 84)

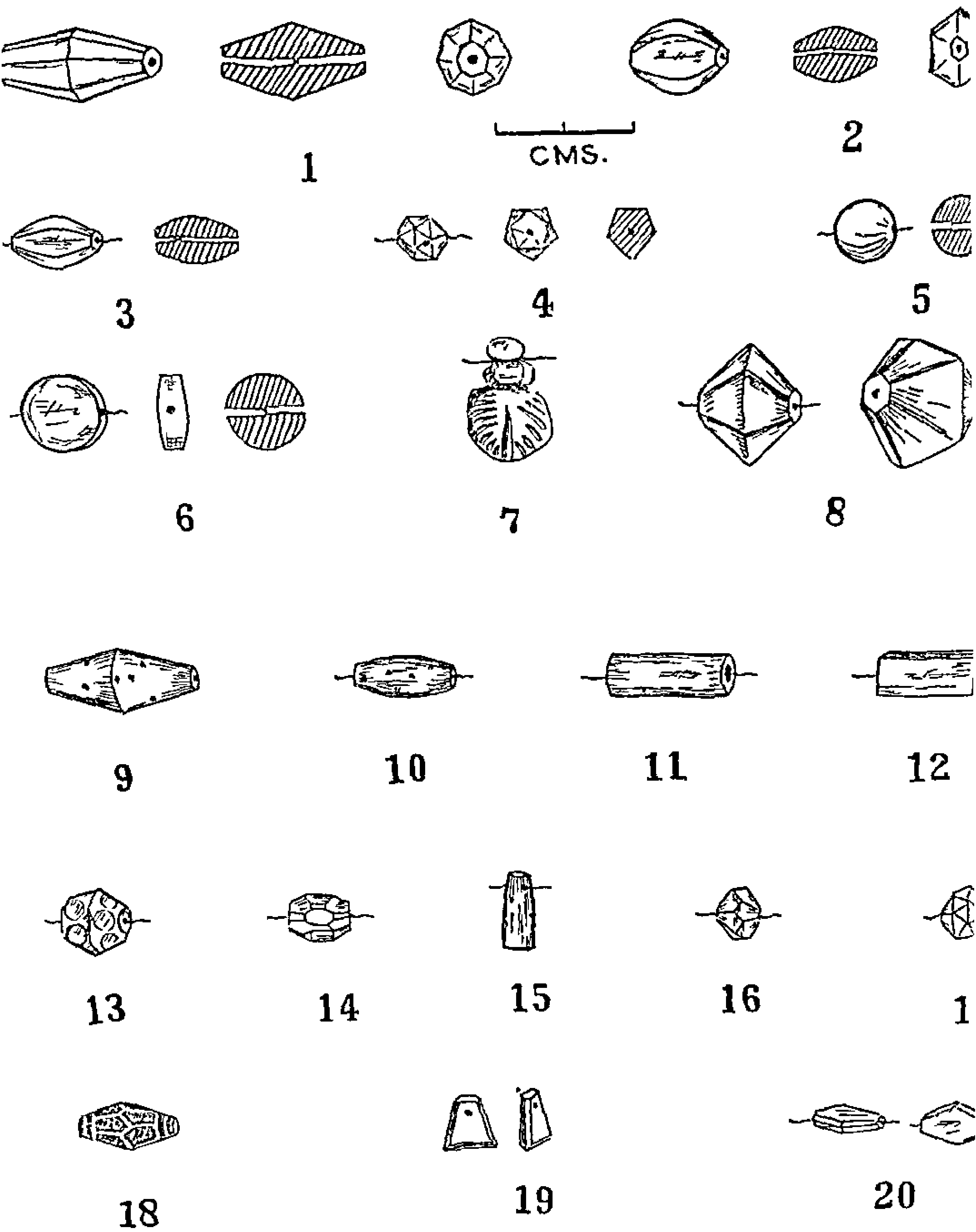


Fig 45 Beads (Crystal Blood Stone Lapis lazuli and Carnelian)
(*See pp 87, 88, 90*)

Out of these, 53 1% are made of terracotta Next to it come crystal and then jasper Other materials alphabetically arranged, are the following

Agate 1, Amethyst 1, Bloodstone 2 Bone 8 Carnelian 6 Crystal 15 Glass 7 Gold 1, Jasper 9, Lapis Lazuli 2, Opal 3, Quartz 8, Shell 5, Soapstone 1 and Terracotta 85

Agate

Only one bead of this material was found

Fig 46 No 3 — This is of a short cylinder shape with milky white band in the centre translucent grey brown at one end and transparent at the other No 5182, MG N D(5) Period IIA

Amethyst

A single specimen was recovered

Fig 46 No 6 — Of a roughly ovoid shape slightly worn out one end more purple than the other No 215, MG N G(5) Period IIA

Bloodstone

Two beads were found in layer (5)

Fig 45 No 9 — This is a finely polished truncated biconical bead of blackish olive green colour with several bright blood red and a couple of greyish white dots No 796, MG N E(5) Period IIA

No 10 — Barrel shaped and comparatively worn out No 842 MG N C(5) Period IIA

Bone

Among the eight bone beads, five came from MG N Of these, four are of special interest as they were found in a group and are well preserved All of these [Nos 683-86] are of a collared barrel-shaped variety with incisions that leave a rope design in relief They can be ascribed to Period II A [Fig 46, No 4]

Besides these, two globular [Nos 102 and 1000 both of Period III-IV] and one unfinished bead of a cylindrical shape [No 448, Period IV] were found

Carnelian

Six carnelian beads were found out of which one was unstratified and one etched The last as well as three others came from layer (5), and one from (4)

Fig 45 No 19 — This is a fine smooth tabular triangular pendent of deep red carnelian with the perforation near the truncated top, slightly worn out on one face No 804, MG N E(5) Period IIA

No 20 A deep red lenticular diamond shaped bead, with polished surfaces, two lengthwise perforations and a white dot near one end No 675, MG N E (4) Period IIB

The other varieties are a truncated bicone [No 184, Period IIA], a hexagonal bicone [No 589, Period IIA], and a short truncated barrel [No 697, unstratified]

The etched carnelian bead was also found from the layer of Period IIA

No 18 A deep, orange red coloured bead of truncated biconical shape, with the white etching wiped out in some parts No 622, MG N. D(5) Period IIA

Crystal

Fifteen crystal beads were recovered, eleven out of which came from the fifth layer.

These beads are outstanding for their polish and shapes Truncated bicone, twisted pentagon and hexagons are the favourite shapes In some cases, the polishing makes the bead unique, as in the case of No 811.

Fig 45, No 1 A hexagonal biconical bead of transparent crystal with double perforation and excellent polish No 811, MG N D(5) Period IIA

No 2 A short convex hexagonal biconical bead of medium polish, double perforation No 874, MG N C(5) Period IIA

No 3 A hexagonal barrel bead of transparent crystal No 32, MG N A(4) Period IIB

No 4 A smooth, medium polished, twisted hexagonal bicone bead of transparent crystal, elegantly faceted No 599, MG N D(5) Period IIA

No 5 A spherical bead, transparent, slightly worn out No 577, MG.N A(5) Period IIA

No 6 Tablet shaped with veined interior, slightly worn out No 31, MG N E(2) Period III IV

No 7 A double capped crystal pendent with slightly hexagonal sides, having a number of slanting lines incised on both surfaces to give the effect of decoration perforated at the base of the upper cap, finely polished No 89, K W N (3) Period III

No 8 A truncated, biconical, hexagonal faceted bead with double perforation, slightly worn out No 5024, MG N D(5) Period IIA

Pl XXI, No 2 A polished crystal couchant lion pendent with the tail end tapering, curved and broken, the other end shows the forelegs, the mouth, eyes and the mane, perforated near the chest, delicately made No 405, MG N D(3) Period III IV

Besides the above, two spherical [Nos 829 5040] one short barrel [No 512] one biconical [No 5187] one long hexagonal barrel [No 616] and one truncated biconical hexagonal [No 5094] beads were recovered They belong to Period IIA

Glass

Out of seven glass beads, six belong to Period III-IV, and one comes from the layer of Period IIA.

Two colours, green and blue, are used One interesting bead is of composite glass technically called "blotched" [No 442] It consists of yellow matrix covered over by green glass [Fig 46, No 10] and belongs to Period III-IV

Other shapes such as low truncated barrel and globular are represented by Nos 21 [Period III-IV], 506 [Period IIA] and No 5003 [Period III-IV], respectively.

Gold-foil Beads

All the three beads of this type were recovered from the layers of Period III-IV. Two are of short barrel groove collared variety (Nos 131, 441), and the third is a barrel, tabular, groove-collared bead

Fig 46, No 1 A short barrel groove collared hollow bead with prominent collars No 131, MG N B(3) Period III IV

No 2 A barrel tabular groove collared bead much worn out and soiled No 146, MG N G(3) Period III IV

Gold

One bead of gold was found in the fourth layer of MG E N

Pl XXI, No 3 A bead of circular body with collars at either side, body slightly distorted due probably to pressure from above, weight 2 grains No 5181, MG E N Ie(4) Period III

Jasper

Out of the nine beads five are of red and four of green jasper Seven are globular, one is a truncated bicone, and one of a barrel shape Layers of Period IIA yielded seven beads

Fig 46, No 7 A globular bead of green jasper slightly worn out No 247, MG N G(5) Period IIA

No 8 A truncated barrel of green jasper No 185, MG N B(5) Period IIA

No 9 Globular in shape and having a perfect ring in a fine black line on the red body No 384, MG N C(5) Period IIA

There are five others of a globular shape all belonging to Period II [Nos 383 403, 737, 813 834] No 403 is unbored, and No 737 is a big perforated ball of green jasper No 748 is a barrel of red jasper and belongs to Period III IV

Lapis Lazuli

Two beads of lapis were found, both belonging to Period IIA The material used is of a medium quality presenting a slightly soiled hazy-grey-blue appearance

Fig. 45, No. 11. A long cylindrical bead, slightly irregular, with a soiled body. No 812, MG.N. D(5). Period IIA.

No. 12. A square cylinder bead with three faces soiled and the fourth slightly polished and having bright navy-blue patches over a greyish surface. No. 744, MG.N. E(5). Period IIA.

Opal

Three specimens of this material were found. One is a drop pendent. All belong to Period II.

Fig 45, No 15 A fine drop pendent perforated at the top and having opalescent and milky base, both the top and the base are flat. No. 549, MG.N. C(5). Period IIA.

The other two are twisted pentagons with perfect facets [Nos. 659 and 688].

Quartz

Fourteen out of fifteen beads of this material came from layers of Period II, and one from that of Period IV.

Elegance of finish and selection of multi-coloured material are two noteworthy features of these beads. Twisted pentagon is a common shape.

Fig 45, No 13. A truncated, biconical hexagonal bead with rounded flats in a stone with opalescent and translucent layers which divides the bead into two halves, one half being milky white No. 300, MG N. C(5) Period II A.

No 14 A hexagonal, barrel shaped bead with chamferred ends and panelled facets in a well selected material with a central opaque band in between translucent layers No 5016, MG E N (1) Period IV.

No 16 Twisted pentagonal bicone bead with intermediate facets, of opalescent quartz No 659, MG N E(5) Period II(A).

No. 17. Double pentagonal, biconical, with intermediate facets, grey coloured, chalcedonic quartz No 673, MG N E(4) Period IIB.

Out of the rest, No 213 [Period IIA] is similar to No 300 above but with half of its body pinkish and the other half colourless The whole bead is girdled around the circumference by three fine and close lines in milky white No 5041 is a twisted pentagon of milky white quartz No 5053 is a truncated hexagonal bicone with pentagonal facets, and No 5056 is a fragment of a bead probably similar to No 5053 All these belong to Period IIA.

Shell

Five shell beads were recovered. One of them is a conch shell bored at the top. Three belong to Period IIA and two to Period IV.

Fig. 46, No. 5. A tabular triangular shell pendent thicker at the top where it is perforated, smooth and polished No 5189, MG N. B(5) Period IIA.

Other shapes are circular, broadbased and slightly tapering [No. 30, Period IV], biconical with groove collars [No 687, Period IIA], cylinder-disc [No 785, Period IV], and a perforated shell [No 5188, Period IIA]

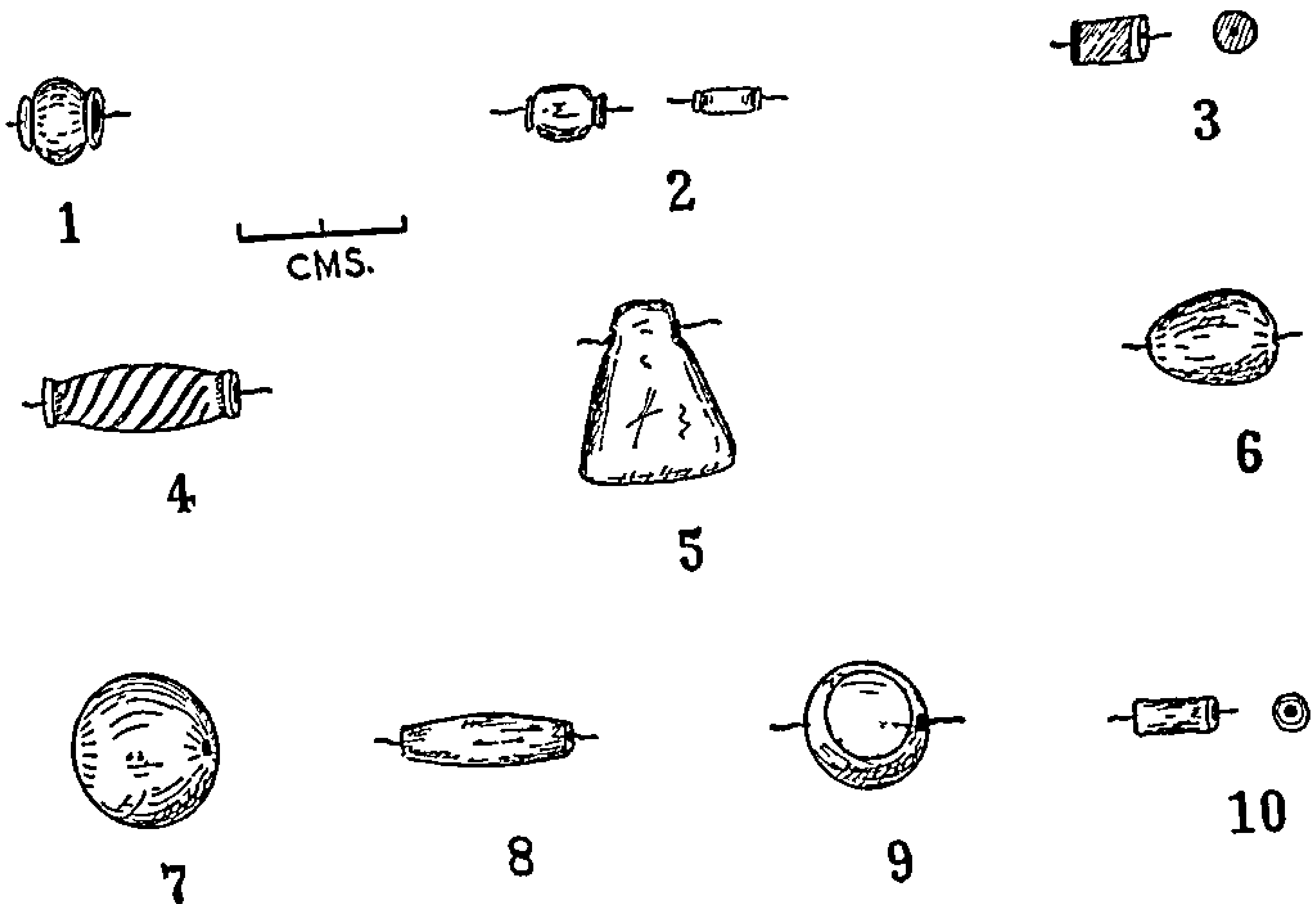


Fig 46 Beads (Goldfoil, Agate, Bone Shell Amethyst, Jasper, Glass).

(*See pp 87, 89, 90*)

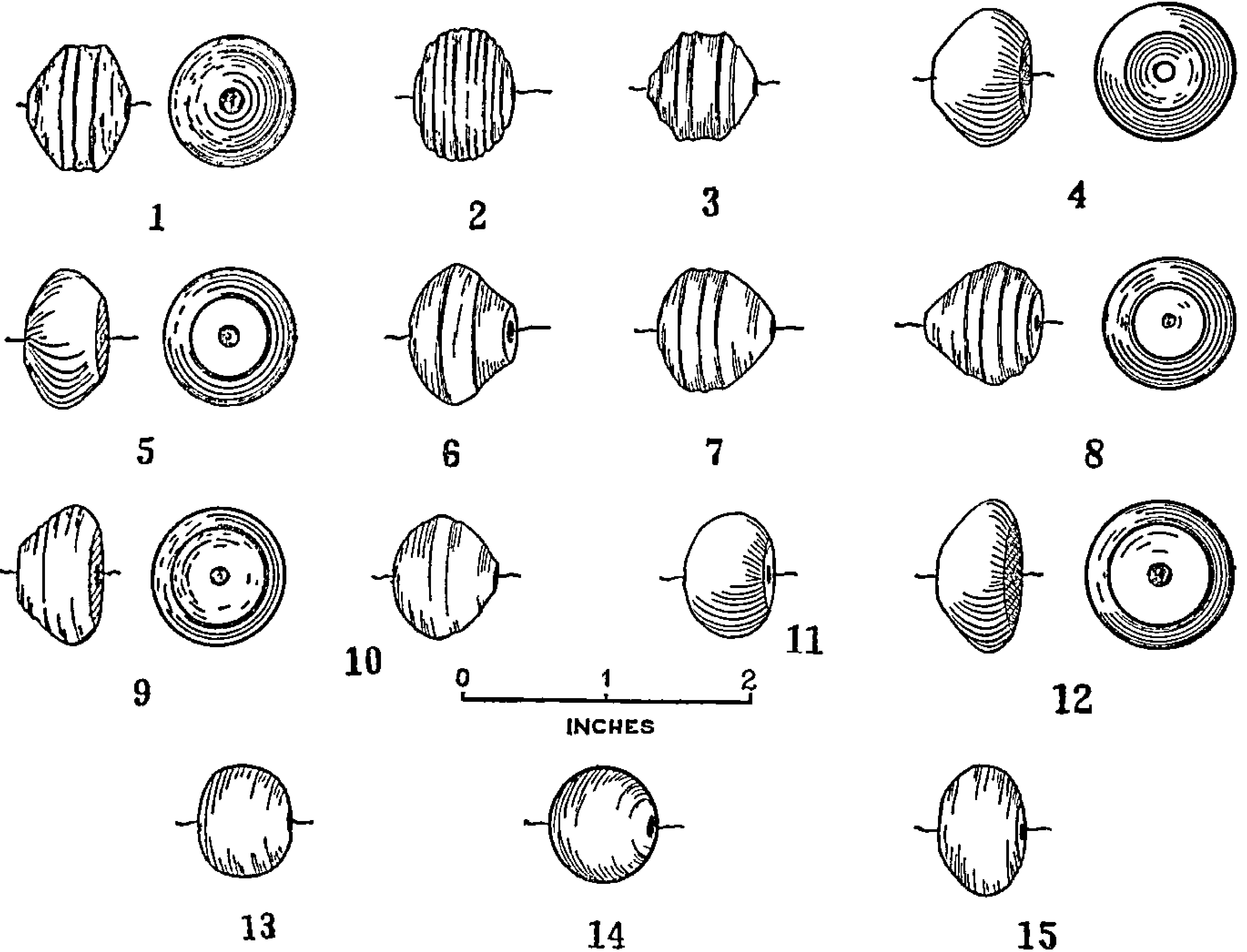


Fig 47 Beads (Terracotta)

(See p. 91)

Soapstone

A double-pentagon of blackish ash coloured soapstone was found in the layer of Period IIB. It is smooth, polished and well faceted. [No. 673]

Terracotta

Out of 93 terracotta beads, 85 are stratified. Fundamentally identical in shape—areca-nut—they differ in details from one another. They are wheel-made, as indicated by the perfect and close grooves around the body of many of them.

Majority of these beads are concentrated in layers of Period II, though they seem to have been in use in all the later periods as well.

Some of the varieties among the basically areca nut shape are as follows —

(i) Standard Areca nut shaped [Fig 47, Nos 4, 5, 12,]
Nos 9, 14, 27, 76, 110, 119, 124, 128, 141, 150, 153, 159, 160, 176, 210, 214, 219, 242, 252, 286, 372, 412, 413, 416, 419, 433, 443, 445, 480, 507, 508, 509, 510, 592, 612, 614, 790, 5096 [the rest unstratified]
Periods IIA, 16, IIB, 8, III IV, 13

(ii) Top shaped with faint grooves on the body and rounded base [Fig 47, Nos 6, 10]
Nos 161, 209, 244, 254, 262, 265, 418, 426, 665, 667, 671, 760, 828
Period IIA, 12

(iii) Pot shaped with truncated top, convex base, grooveless body [Fig 47, No 15]
Nos 39, 229, 243, 341, 415, 419, 641, 680, 759
Periods IIA, 6, IIB, 1, III IV, 2

(iv) Roughly globular [Fig 47, No 13]
Nos 208, 235, 236, 283 414, 444 511, one unnumbered
Periods IIA, 6, IV, 2

(v) Spherical [Fig 47, No 14]
Nos 166, 288, 355, 741 All Period IIA

(vi) Having a series of grooves so as to have an effect of gadrooning [Fig 47, Nos 2, 3,8 9]
Nos 264, 340, 682, 740, 790 one unnumbered All Period IIA

(vii) Pulley shaped, with a pair of symmetrical grooves round the circumference [Fig 47, Nos 1, 7]
Nos 207, 253, 285, 505 1 unnumbered All Period IIA

(viii) Perfectly low plano convex [Fig 47, No 11]
Nos 372, 376, 446 All Period IV

Besides the areca-nut shape, two other varieties are represented by No 594 which is low truncated barrel, and No 424 a truncated bicone with faint broad grooves on the body Both these belong to Period IIA.

Distribution

The layerwise distribution of Nasik beads is as follows :—

LAYER	TRENCHES				
	MG.N.	MG N N.	MG S N.	MG E N.	K.W.N.
5	99	....	....	....	....
4	12	1	....	1	....
3	21	....	....	2	1
2	5	....	....	3	1
1	1	....	....	1	....

This shows that layers of Periods II [i.e. 4 and 5] at MG.N. yielded 69.3% of the total number of beads. The meagre amount of beads in Period III may be due to the fact that the debris of this period were not extensively dug. The layers of Period IV are very much disturbed and it is possible that some of the beads found in them belong to earlier layers.

General Remarks

The absence of unfinished beads or core lumps of different materials shows that Nasik was not a bead industry site at any time. The amount of beads also is not much. Even among that terracotta beads are 53% of the total.

The remarkable feature of the terracotta beads is the range of variety in the basically areca-nut shape. These beads are found over a very wide stretch of time at various sites[1], from proto-historic times at Mohenjodaro to the Maratha period at Nasik. Probably nowhere else, except at Kosam in U.P., such a minute differentiation in the areca-nut shape is found as at Nasik.

1 *Harappa* VATS, *Exc at Harappa*, Vol I, p 408 Gupta period acc. to Beck; *Taxila* (Sirkap) "Pear shaped", attributed to all phases I IV from c A D 50 to 2nd cent A D *Ancient India*, No 4, pl XI, Nos 33 35, *Brahmagiri* three varieties, found in Andhra and Megalithic levels *Ancient India*, No 4, pl CXX, 42 44, also p 265; *Bairat*, SAHNI, *Exc. at Bairat*, pl V, No 9, *Kondapur*, DIKSHIT, *Beads from Kondapur*, p 22, pl V, No 238, (also *ABORI*, pl XII, 17th Row), *Arikamedu*, *Ancient India*, No 2, Fig. 41, Nos 42 44, *Kolhapur*, SANKALIA & DIKSHIT, *op cit*, pp 93-4; *Baroda*, SUBBARAO, *Baroda through the Ages*, "a large number of types among the areca nut beads", p 74, occurring in Periods II to IV i e 100 1300 A D Fig 30 A number of these are also reported from *Karad* in the Deccan, and *Kosam* in U P

Though carnelian and agate are found in the Deccan[2], the principal source of carnelian is a village called Limodra near Ratanpura in the Rajpipla State [Gujarat] from where the stones are sent for cutting and polishing to the lapidaries of Cambay.[3] Cambay and Broach are well known centres of bead industry since early historic times[4]. It is, therefore, quite possible that beads of carnelian, agate, jasper and blood-stone came to Nasik from Cambay. This is further corroborated by the absence of un- to Nasik from Cambay. This is further corroborated by the absence of un- finished beads or large cores of these stones at Nasik. The shapes of the carnelian beads of Nasik are common and the etched bead is exactly similar to one found at Taxila[5]. The dates of both of these [c. 3rd cent. B C.] tally well.

The crystal beads, though remarkable for their polish, show no new shapes. At least three of these are identical with those found in the Andhra period at Kondapur, viz , long hexagonal truncated barrel[6], tablet-shaped[7], and short truncated hexagonal barrel[8]. Of the three, the tablet shape is frequent in South India, and Dr DIKSHIT specifically denotes it as " South Indian Type ".[9]

The two lapis lazuli beads have the most common shapes Square cylinders have been found from several sites in the Deccan such as Kolhapur[10], Kondapur[11], Maski and Kallur[12] Everywhere this shape can be ascribed to c 3—2 cent B C. Even though beads of lapis have been found from the Indus Valley sites, the material is not indigenous to India[13]. It is, therefore, likely that these came to Nasik from outside.

Among the quartz beads some of the shapes viz hexagonal bicone with rounded flats and one with panelled facets are rare It may, however,

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2 WADIA, D N *Geology of India* pp 360 1

3 *Bombay Gazetteer*, Vol VI, pp 12, 162, 168, ARKELL, A J, Cambay and its Bead Trade, *Antiquity*, Vol X p 301

4 *Bombay Gazetteer*, Vol VI, pp 11 12, 162 f n 1, 205 06, ARKELL, *op cit*, pp 208 ff.

5 BECK *Beads from Taxila*, pl II No 7

6 DIKSHIT, M G, *Beads from Kondapur* (1952) pl I, No 27 (Cf Nasik, Fig 45, No 1)

7 *Ibid*, I, 38 (Cf Nasik, Fig 45, No 6)

8 *Ibid*, I, 43 (Cf Nasik, Fig 45, No 3)

9 *Ibid*, p 9

10 SANKALIA and DIKSHIT, *op cit*, p 91

11 DIKSHIT, *op cit*, pl II, No 83

12 Deccan College Museum collection

13 *Bombay Gazetteer*, Vol VI, p 201 " it is found in rounded balls in Persian and Bukharan river beds."

be noted that the former shape in chalcedony, agate and carnelian has been found at Taxila[14] and Kondapur[15].

Glass beads at Nasik have two peculiarities. The first is represented by a few specimens of what is called as "gold-foil bead." Similar beads are found in the Deccan at Karad [Bombay] and Kondapur[16] where they are ascribed to the Andhra period. At Kolhapur also they were found in layers of the Satavahana period[17]. The other variety is "the blotch bead" consisting of yellow matrix covered over by green glass. An exact parallel to this shape and make is reported from the Bahmani layers at Kolhapur[18].

Out of the five pendents, three are of known shapes, viz., tabular triangular of carnelian and shell[19], and the drop pendent of opal. Especially the drop pendent is a favourite shape in different materials at Taxila[20].

The other two [hexagonal body with two caps, and lion : both of crystal] are outstanding for shape and polish. Of these two, one [the lion] belongs to Period II. It is possible that the other pendent also belongs to the same period considering the fact that the layers of Period III in which it was found, are much disturbed. Pendents of this shape have not been so far recovered elsewhere. These are the finest specimens in the whole lot of beads at Nasik.

VIII

BANGLES AND OTHER GLASS OBJECTS

Bangles, as found at Nasik, were either of shell or of glass. Out of the fifty-six specimens, thirty-seven were of conch shell and the rest of glass.

Conch Bangles

Of the thirty-seven specimens, thirty-two came from stratified layers. All of these, except two [Nos. 424 and 5504] came from layers

14. Beck, *op cit*, compare, pl II, Nos 38 (3rd cent B C), 40 (4th cent. B.C.), 44 (1st cent A D) These are, however, called as "cemented eye" beads Nasik bead is not an eye-bead, The Kondapur specimen is of chalcedony ascribed to Andhra period, Dikshit, *op. cit.*, pl II, Nos 103 04 "occur frequently in the 2nd cent B C. levels at Kosam" (p 12, f n. 2), for the panelled facet variety, compare, pl. II, Nos 41-42, Beck, *op. cit*, pl II, 41 (only for shape)

15. Dikshit, *op cit.*, pl. IV, Nos 206 09

16 Dikshit, *op cit*, pl IV, Nos 206 09.

17. Sankalia and Dikshit, *op cit*, p 101

18. *Ibid*, p 104

19. Beck, *op cit*, pl VIII, No 14 [without rounded base].

20 *Ibid*, pl III, 12, 13 [agate], IV, 25, 27, 31 [carnelian], V, 7 [quartz], VI, 24 [lapis], 26 [granite], etc.

(1) to (3) showing that shell bangles were current at Nasik mostly in Period IV, that is, in the Muslim-Maratha phase of occupation

Two fragments of shell bangles belonging to Period II have nothing distinctive about them They are neither decorated nor well made No 424 coming from layer (4) i e Period IIB has a slightly double convex cross section, while No 5004 recovered from layer (5) has a rectangular one

The bangles of Period IV can be divided into two types—plain and decorated The former, made in most cases out of the thickest part of a conch shell and eighteen in number, vary from 38 mm to 76 mm in diameter and are of brown creamy colour in several cases

Plain Bangles

The plain ones may be divided into the following varieties —

(i) With a plano convex cross section [Nos 6 11 28 29 148 and 376]

(ii) With an elliptical cross section [No 23]

(iii) Slightly oval in section [Nos 23a 120]

(iv) With a rectangular cross section [Nos 63 126 138 395a 5004]

(v) Miscellaneous
No 20 Elongated oval section MG N A(2)
No 395 Slightly crescent like section MG N E(3)
No 440 With a cross section like the English r MG N D(3)

Decorated Bangles

The decorated varieties have a wide range of ornamentations over them The most common decoration seems to be leaving a knob—either circular or heart shaped—in relief on the outer surface [Nos 9 16 17 40d] The other decorative patterns are v shaped parallel incisions [No 9] a pair of vertical parallel incised lines [No 13] a number of parallel incisions [No 16] incisions at random [No 14 140d] and a faint groove along the outer surface [No 132] Besides these there are a few specimens which reveal a more elaborate and perfectly symmetrical range of designs as for instance an incised rope like design [No 132a] a series of vertical diamonds in relief which give the outer surface an appearance of segmentation [No 716] small vertical incisions near the ends of the outer surface with a pair of parallel horizontal lines along the circumference enclosing in between them a design of incisions and pentagonal beads in relief [No 148a] and lastly octagons in relief with four radial incisions in them appearing like a floral design [No 5005]

These decorated varieties are usually broader than the plain ones and have uneven thickness It may also be noted that these shell bangles are not always perfectly circular in shape and being cut out of a shell at its thickest part and curvature they assume sometimes the shape of a bow [No 17] or the English letter c

The layerwise distribution of these bangle pieces irrespective of their classification as made above is as follows —

Periods	Layer No	MG N.	MG E N.	MG N N	K W.N	MG S N
IV	1	8	1	..	..	..
IV	2	14	1	1	1	.
IV	3	5	..	..	..	.
IIB	4	1	..	.	..	..
IIA	5	1	.		..	..

Out of these, some specimens are illustrated in pl XXI

No 11 Half of a broad shell bangle with the outer surface having vertical incisions bounded by a pair of horizontal lines near both the edges Breadth 10 11 mm No 748, MG N D(3)

No 12 Fragment, squarish cross section, the outer surface decorated by horizontal incised line, a series of short vertical lines and a slightly triangular knob in the middle Breadth 4 5 mm Thickness 4 mm No 16, MG N G(2)

No 13 Fragment, slightly plano convex cross section, having a pair of successive horizontal incised ' V ' design and a roughly heart shaped knob in relief in the middle Breadth 8 mm Thickness 3 7 mm No 9, MG N G(2)

No 14 Bow shaped fragment of a shell bangle, thin and having a circular knob in relief in the middle of the outer surface Thickness 5 mm No 17, MG N G(2)

No 15 Square cross section, uneven thickness, and an incised rope like design on the outer surface Breadth 6 mm Thickness 4 5 mm No 132a, MG N G(1)

No 16 A fragment of uneven thickness and breadth, roughly rectangular in section, the outer surface decorated with rough octagons in relief having four radial incisions in them appearing like a floral pattern Breadth 7 mm Thickness 6 mm No 5005, MG E N H(2)

No 17 A fragment with a round section and the outer surface having a series of vertical diamonds in relief which give it an appearance of segmentation Breadth 6 mm Thickness 5 mm No 716, MG E N (1)

No 18 A fragment, thick in the middle having four vertical and parallel incised lines which have a random design at one end and somewhat ' V ' shaped incisions at the other end, he ' V ' shaped designs enclose in between them a slightly triangular knob in relief Breadth 7 mm Thickness 5 mm No 140d, MG N D(2)

No 19 A milky white fragment, plano convex in section having short vertical incised lines near the two edges enclosed by a pair of horizontal lines, the latter en closing in between them a decoration consisting of vertical lines in hexagonal panels in relief Breadth 10 mm Thickness 4 mm No 148a, MG N G(2)

Glass Bangles

Out of the nineteen fragmentary glass bangle pieces, sixteen came from stratified layers All these were recovered from the two top layers

in all the trenches and hence can be ascribed to Period IV. Though bangles were known in Period II, not a single piece of glass bangle was found in layer (4) or (5). This seems to support the inference reached from Kolhapur evidence, viz. that though glass making was known, bangles, particularly polychrome, were first made in the Deccan only in the 14th-15th century.

The use of monochrome and polychrome glass bangles seems to have been contemporary inasmuch as both these varieties were recovered almost in the same quantity from identical layers

Monochrome

Among the nine monochrome pieces [in addition to which three were also recovered from the surface], six were decorated either with grooves, incised dots or short vertical lines on the outer surface, and three were plain Six out of nine have a triangular section, while two have a plano convex, and one a squarish section

The range of colours includes chocolate, blue, green, black and purple The thickness varies between 2 to 3 5 mms

Monochrome

Antiquity No	Colour	Section	Opaque or Transclucent	Decoration	Findspot
25	Chocolate	Square	Opaque	Grooves	MG.N G(2)
60	Bluish	Triangular	Transclucent	Incised vertical lines	K.W N d_1(2)
64	Dark green	Plano convex	,,	Nil	,, d_4(2)
103a	Blue	,,	,,	,,	,, d_2(2)
108	Dark Orange or Deep Brown	Triangular	,,	Incised dots	,, c_2(2)
838	Green	,,	,,	,,	MG.E N (1)
864	,,	,,	,,	,,	,, (1)
865	Black	Plano convex	Opaque	Nil	,, (2)
866	Purple	Triangular	,,	Grooves and incised dots	,, (1)

Polychrome

The seven polychrome fragments reveal a limited range of colours Yellow and its shades and combinations, green and white seem to have been the most popular colours even though black, chocolate and ashy were used These bangles are identical in colour and fabric to those from Kolhapur and examined by Dr LAL Archaeological Chemist, Government of India From his report, it is possible to say that the yellow and black colours are due to the presence of oxide of iron, white due to that of tin green due to those of copper and iron

His remarks regarding a polychrome bangle piece from Maski hold good even in the case of similar bangles from Nasik as well He says, " the craftsmen who fabricated this bangle were adept in the art of handling glass and could manipulate molten glass with great skill The designs have obviously been executed by sticking to the body of the bangle carefully prepared bands of glass of different colours

The thickness of the polychrome pieces is more than that of the monochrome variety The former varies between 2 5 to 6 mm

Polychrome

Antiquity No	Colours	Section	Opaque or Transclucent	Findspot
65	Yellow, white, black	Triangular	Opaque	K W N d2 (2)
103	„	„	„	„ d2 (2)
311	White, orange, yellow, ashy	„	„	MG N D(2)
845	„	„	„	MG E N II (2)
877	Deep yellow, light yellow, chocolate, green	Square	Opaque and transclucent	„ II (2)
5014	Yellow, white, orange, green	Rectangular	„	„ III (1)
5015	Yellow, chocolate, green	„	Semi transclucent	, III (1)

The illustrated polychrome pieces are as follows [pl XXI].

No 4 Roughly rectangular cross section , having yellow colour at the base over which there is a chocolate coloured layer containing truncated barrel shaped design in yellow which itself contains a truncated double convex green patch having a oblique yellow line Breadth 5 mm Thickness 2 5 mm Diameter 50 mm No 5015.

No 5 Fragment of a green and yellow glass bangle having yellow and white vertical lines on an orange square lying over a bigger greenish rectangular decorative base Breadth 5 mm Thickness 3 4 mm Diameter 60 mm No 5014

No 6 Squarish cross section , having a yellow layer near the inner circumference over which there is a green one , over the latter are chocolate coloured bead like dots in relief and whitish yellow elliptical decoration Breadth 3 mm Thickness 3 4 mm Diameter 75 mm No 877

No 7 Opaque triangular section , having a thin layer of ashy colour over which there is a broad yellow band covered over by another thin layer of orange colour , the latter having white dots in relief Breadth 7 mm Thickness 6 mm Diameter 50 mm No 311

No 8 A fragment with triangular section with a band of white colour at the base covered over by another of yellow at the apex is a thin band of ashy colour Breadth 5 mm Thickness 4 mm No 103

No 9 Opaque, with triangular cross section , at the apex is a yellow band while the rest of the body is whitish on one side there are a series of decorations in light black Breadth 1 mm Thickness 5 mm Diameter 50 mm No 65

No 10 A fragment of triangular section with ashy coloured band at the base covered by another broad band in orange over the latter a yellow thin band with bead like dots in white Breadth 7 mm Thickness 4 mm No 845

Glass Ring

A single fragment of a black glass ring was found Its breadth was 11 mm It had a somewhat porous surface, and was recovered from K W N d_2 (2) It, thus, could be ascribed to Period III—IV Not illustrated

Other Objects of Glass

Besides bangles of glass, thirty-three other objects of glass consisting of discs, pieces of highly disintegrated glass and fragments were found

Their trench and layerwise distribution is as follows —

Layer No	MG N	MG S N	MG E.N	K W N	MG.N N
1	1	1	1	1	1
2			3	2	
3	3	1			
4	4				
5	16				

It is evident from the above classification that more than half of the glass objects belong to Period II, and nearly half out of these to sub Period A of the same

Weathered Glass

Out of the objects belonging to Period II the most interesting are the six fragments of weathered glass Out of these six, four belong to layer (5) [i e Period IIA], one to layer (4) [i e Period IIB] and one to layer (3) Some of the specimens were sent to Dr B B Lal, Archeaelogical Chemist, Government of India, for examination

All the six specimens are very brittle and have a somewhat glossy white appearance It is quite likely that at least Nos 821 and 821A were bangle pieces with the outer surface concave

On examining No 821 [MG N E(5)], Dr Lal remarks that "the sample is highly weathered It seems to have been made originally of ordinary glass, but now much of the alkalies has been eliminated as a result of leaching and the Silica has accumulated The sample shows about 80 99%

Silica . .. .The soda-lime silicates have. ....been more or less completely altered as a result of weathering. Part of the Silica is now present as Chalcedony and Opal".

His report on No 5026 [MG N D(5)], which consists of pieces of decayed glass is more or less similar to that on No 821. Here also, according to him, "the greater part of the alkali originally present in the sound glass has been leached out by water in the course of centuries of burial in the soil The percentage of Silica . . . is 87 55 .. .... The specimen shows iridiscent colours so characteristic of decayed Roman glass From this it is clear that as a result of weathering, the complex soda-lime silicates have been largely altered with the formation of secondary Silica some of which has been deposited as Chalcedony showing the typical structure and some of it has been re-deposited as Opal"

No 550 [MG N B(5)] is an irregular piece of black blue-grey glass It is only superficially weathered but has a sound and fresh core It is composed of ordinary soda-lime glass "The black colour of the glass has been completely obscured by a layer of Silica which has got deposited on the surface as a result of weathering". It is probably a part of a black disc-like object

Glass Discs

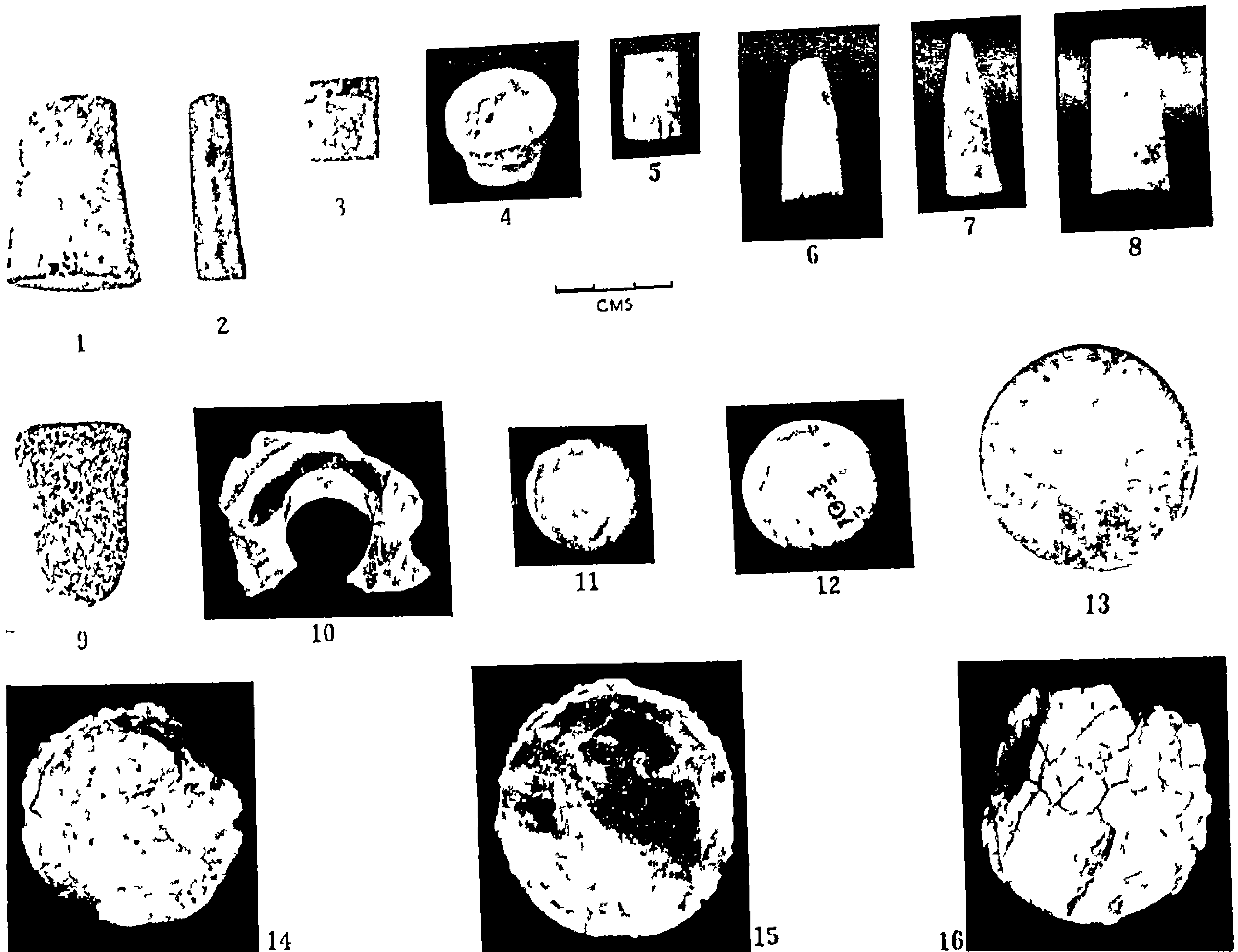
Out of the seven glass discs recovered, layer 5 [i e Period IIA] of MG N yielded four, MG S N layer 3, one, layer 1, one, and MG N N layer 3a, one specimen

The complete specimens which are five in number are all similar in shape They are disc-shaped with a groove at the thickness of the circumference Only one is having a hole in the middle, while the others are unperforated

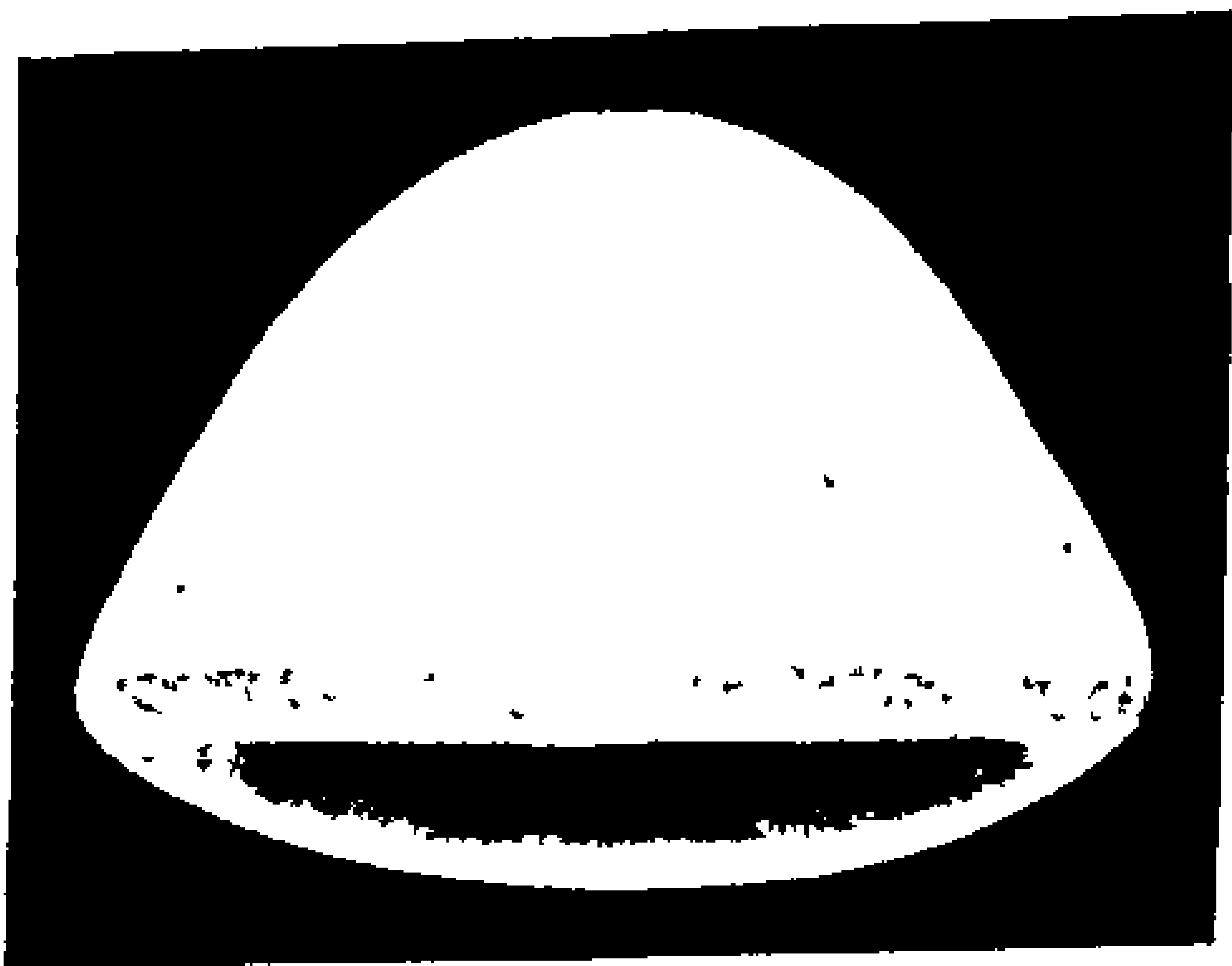
Similar discs of glass were found at Kolhapur, Karad, Kondapur and elsewhere in early historic layers Their purpose cannot be determined

Out of the seven, two are light blue in colour, three white, one vermilion or liver-red coloured, and one highly weathered Their range of diameters varies between 61 to 69 mms, and that of thickness between 21 to 9 mms [pl XXII]

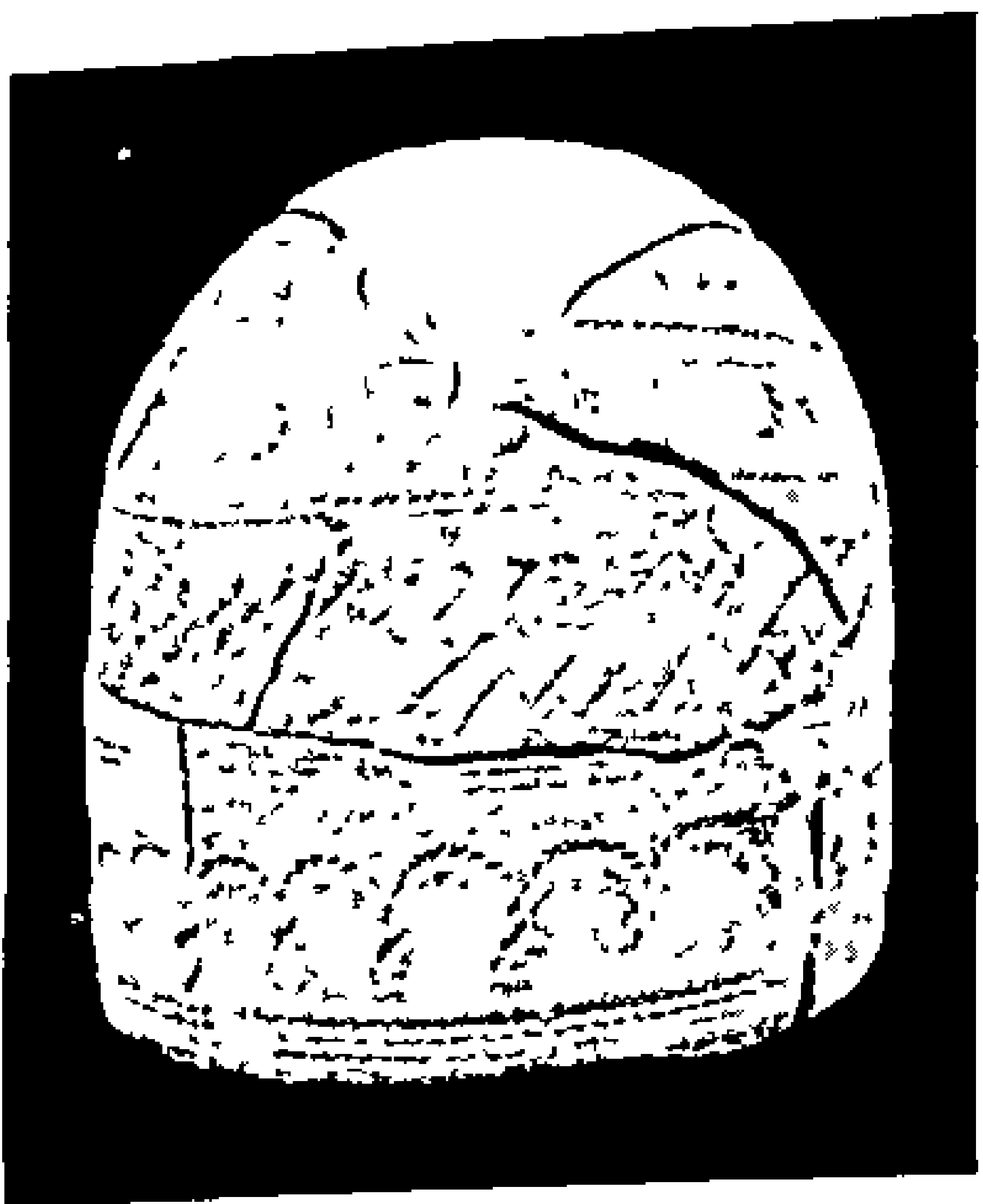
No 10 Light blue coloured disc extremely worn out having a groove at the thickness of circumference, perforated in the middle Diameter 60 mm Diameter of the hole 23 mm Thickness 18 mm No 193, MG N F(5) Period IIA



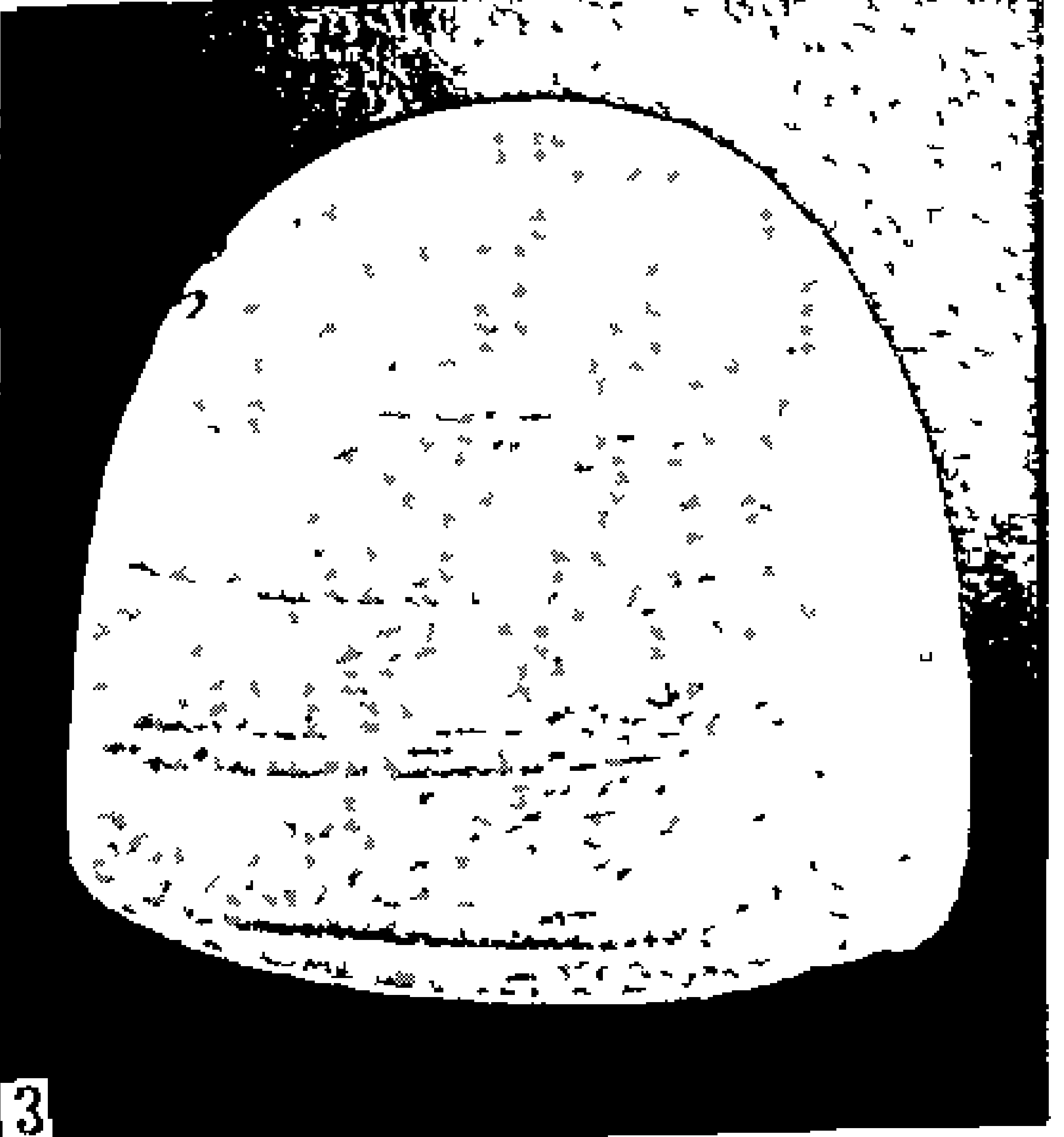
Glass and Terracotta objects Terracotta Stoppers (1–8 12–13) Crucible (9) Glass tablets 10 11 14–16) (See pp 100 101, 10? 107)



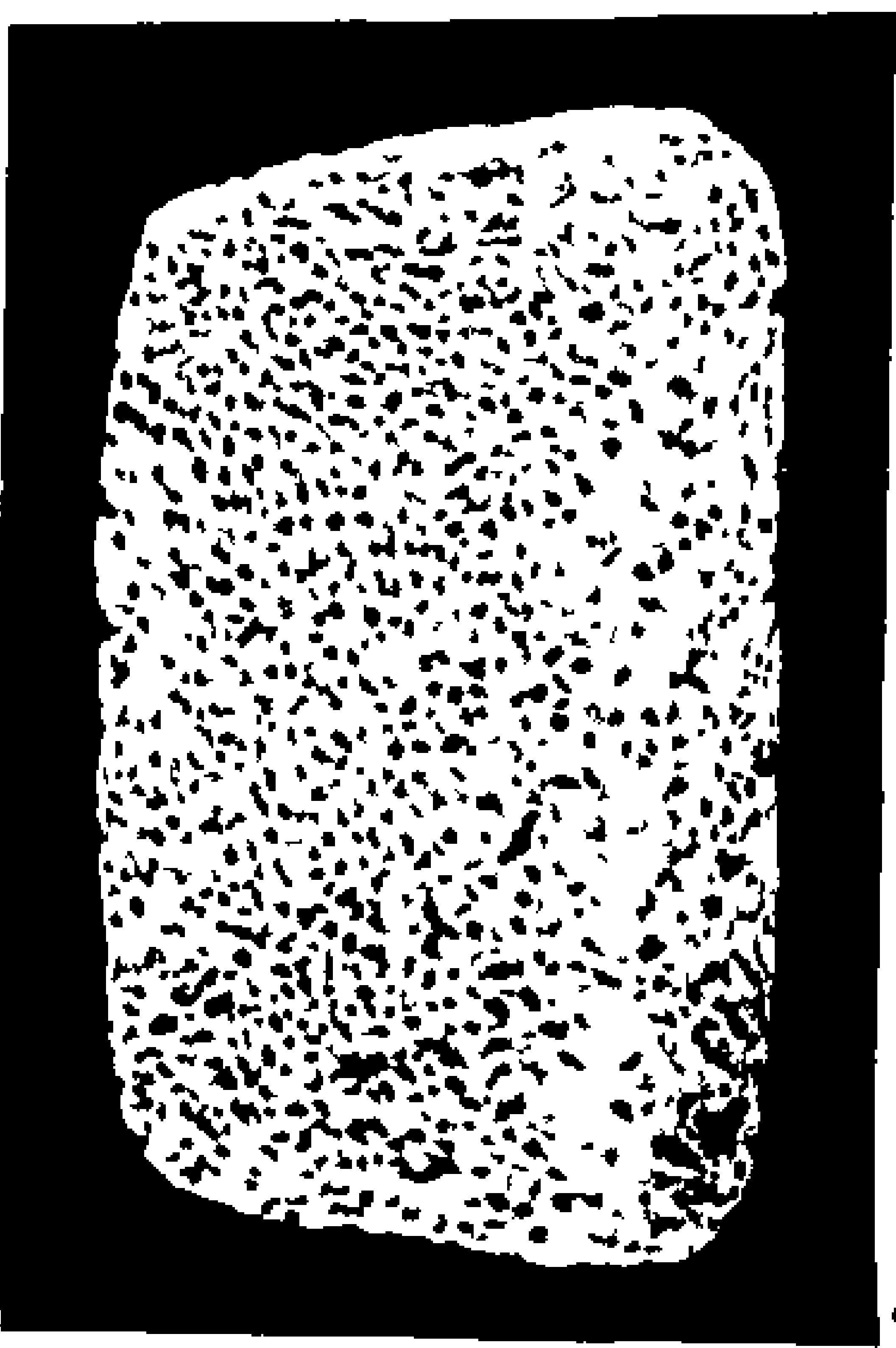
1



2

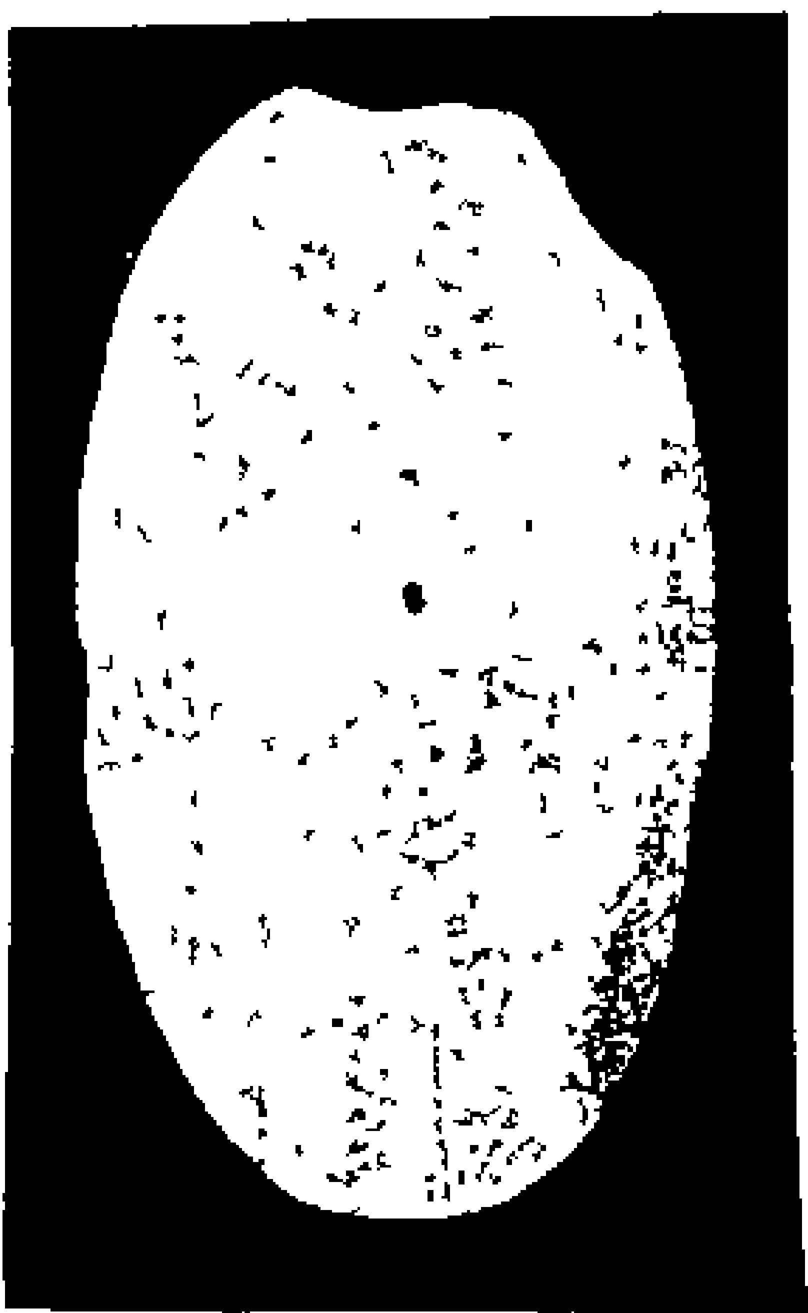


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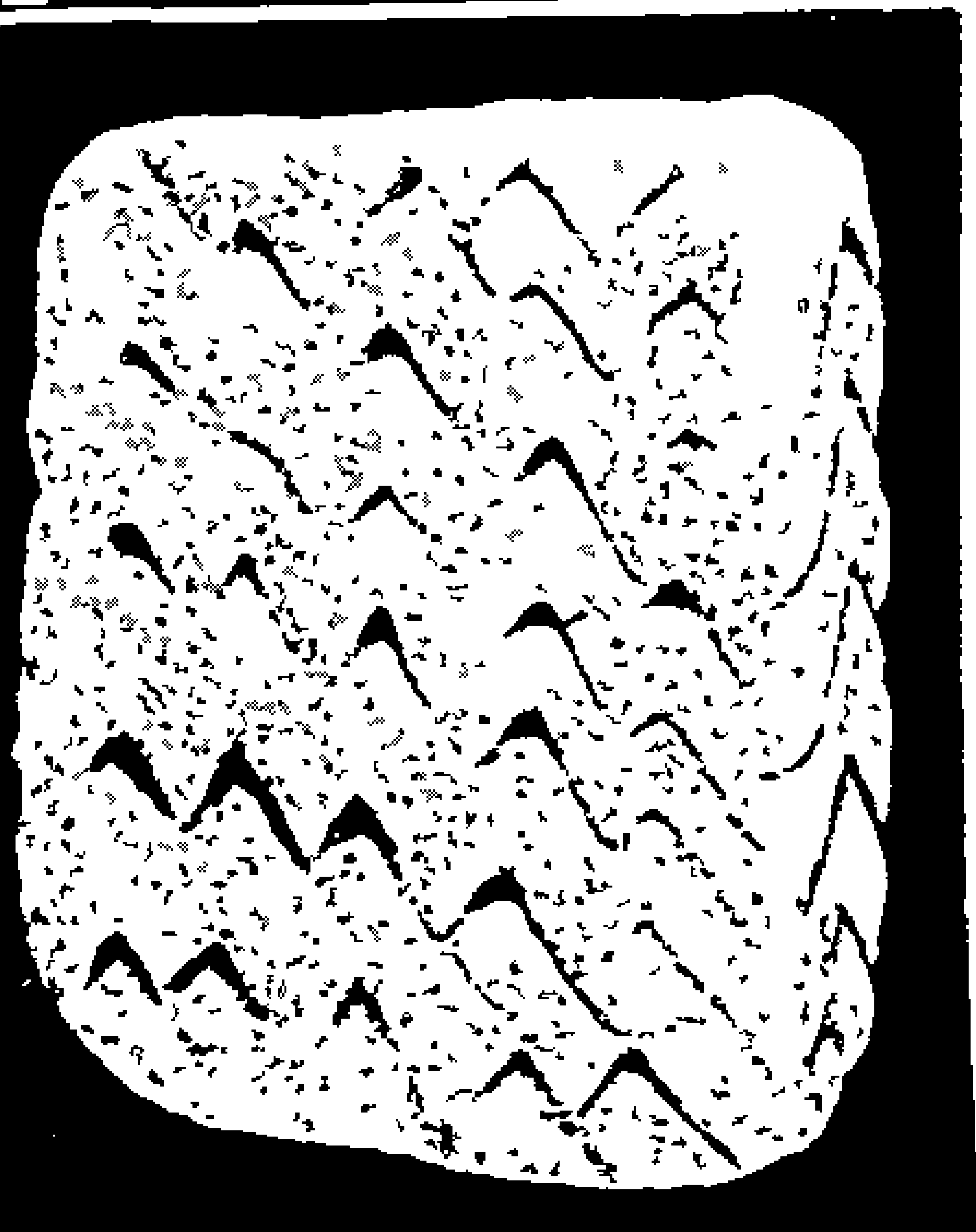


4





5



6

Terracotta Skin Rubbers (1, 4, 5 and 6), Stupas (2 and 3). Period II

No 11 A small and thin disc vermilion coloured, slightly worn out at the edges[1] Diameter 29 mm Thickness 9 mm No 651, MG S N (1) Period III IV

No 14 Similar to above but smaller and thinner, and exposing a vermilion red core under ashy surface Diameter 58 mm Thickness 9 mm No 5164 MG N N (3a) Period II

No 15 Complete specimen similar in shape to above, but unperforated and white in colour, having bubbles and cracks Diameter 61 mm Thickness 21 mm No 5016, MG N D(5) Period IIA

No 16 A glass disc much broken, cracked and highly weathered, of ashy yellow colour Diameter 61 mm Thickness 14 mm No 692, MG S N (3) Period II III (?)[2]

IX

TERRACOTTA OBJECTS

A variety of terracotta objects was obtained from various trenches at Nasik These include skin-rubbers, toys, figurines, stoppers, wheels, crucibles, *stupas* and tiles Most of these belonged to Period II as would be clear from the following details

Skin Rubbers

Fourteen terracotta skin-rubbers of rectangular and semi-circular shapes were found

These rubbers may be divided into four types as follows —

(*a*) Of rectangular shape with both the surfaces made rough with particles of sand and tiny grains of an unidentified material,

(*b*) With pores over all the surfaces of the rectangular body,

(*c*) With deep decorative incisions on the rectangular body, and

(*d*) Roughly semi-circular and hollow, with the outer surface either decorated with incisions or plain

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1 The glass is translucent to opaque but shows liver red colour in reflected light Chemical analysis shows that the colour is due to Copper Oxide'

2 Dr Lal remarks— ' it has undergone considerable alteration due to prolonged burial in the soil As a result of this weathering alkalies have been leached out and insoluble siliceous material has accumulated It contains a very high proportion of silica (about 80%) and some clayey matter and the amount of alkalies is only 2 41% It appears that the silica present in glass originally as a complex soda lime silicate has been deposited as a result of weathering as opal and chalcedony These fragments show a remarkable iridescence characteristic of disintegrated and decayed glass This iridescence is due to the lenticular flakes of silica deposited on the surface as a result of weathering '

The distribution of the above types is as follows —

Type	Total	Findspot	Layer	Period	Unstratified
a	1	MG N	(5)	IIA	
b	3	,,	,,	,,	•
c	4	,,	(5)—2	IIA	
			(3)—1	III-IV	
d	6	MG N	(5)—3	IIA	
		MG S N	(2)—1	III IV	1
		K W N	(X4)—1	II	

Thus all these types were current in Period IIA The following are illustrated [Fig 48]

No 1 A rectangular piece of terracotta skin rubber with three corners broken, and one of the surfaces made rough with particles of sand [Type a] Length 93 mm, breadth 76 mm, thickness 23 mm No 5099 A, MG.N E(5) Period IIA

No 2 A terracotta skin rubber with well defined circular pores on all sides of the body made possibly with tiny, round and sharp end either of iron wire or with reed [Type b] [Also pl XXIII, No 4] Length 95 mm breadth 67 5 mm, thickness 25 mm No 5099 MG N E(5) Period IIA

No 3 A rectangular terracotta skin rubber with a series of deliberate, deep, slightly 'V' shaped incisions at regular intervals decorating both the broader surfaces incisions possibly made with the tip of a sharp blade of something [Type c] Length 99 mm, breadth 64 mm, thickness 20 mm No 313 MG N A(5) Period IIA

No 4 With more prominent 'V' shaped deep incisions over all the surfaces of the body [Also pl XXIII, No 6] Length 92 mm, breadth 77mm, thickness 32 mm No 764, MG N (3) Period IV

No 5 A hollow terracotta skin rubber with a semi circular outline thin and compact walls, the outer surface is red smooth and having a hole at the top, while the inner surface is dull and rough [Type d] Length of the base 90 mm max breadth of the base 41 mm thickness of the walls 5 mm, height 49 mm No 654 MG S N (2) Period III IV

No 6 A boat shaped terracotta skin rubber of buff colour without a perforation at the top Length of the base 85 mm max breadth of the base 46 mm thickness of the walls 16 mm height 31 mm No 281 MG N G(5) Period IIA

No 7 A parabolic hollow cap shaped reddish terracotta skin rubber having a convex elliptical base the outer surface has a partial hole at the top and two closely parallel dotted lines along the outer outline as also a hollow knot like incised design [similar to the Brahmi letter 'ma] over the lines on either side *just above the base [Also pl XXIII No 1]* Length of the base 94 mm, max breadth of the base 52 mm thickness of the walls 13 mm, height 65 mm, No 831, MG N C(5) Period IIA

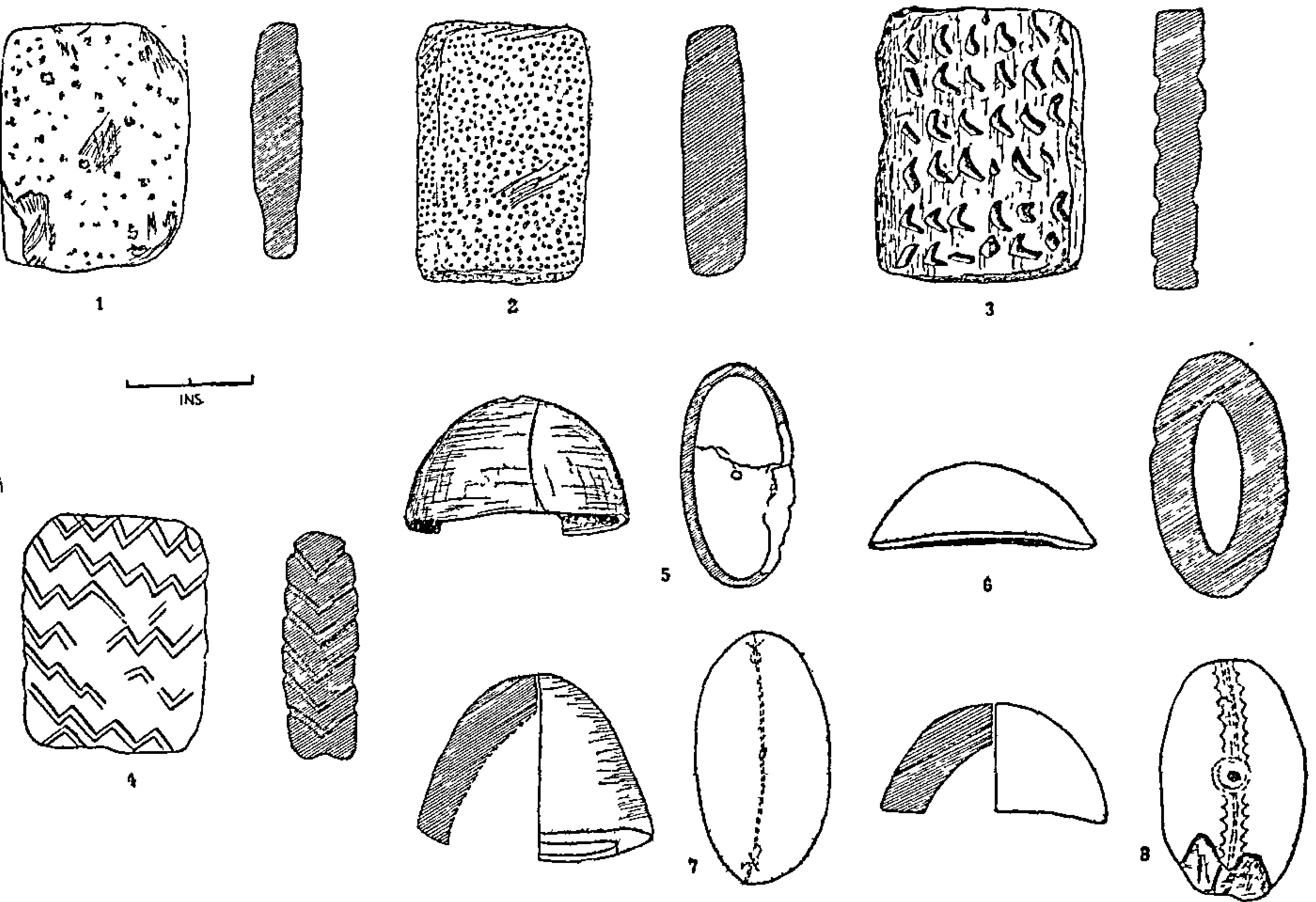


Fig 48 Skin Rubbers
(See p 102)

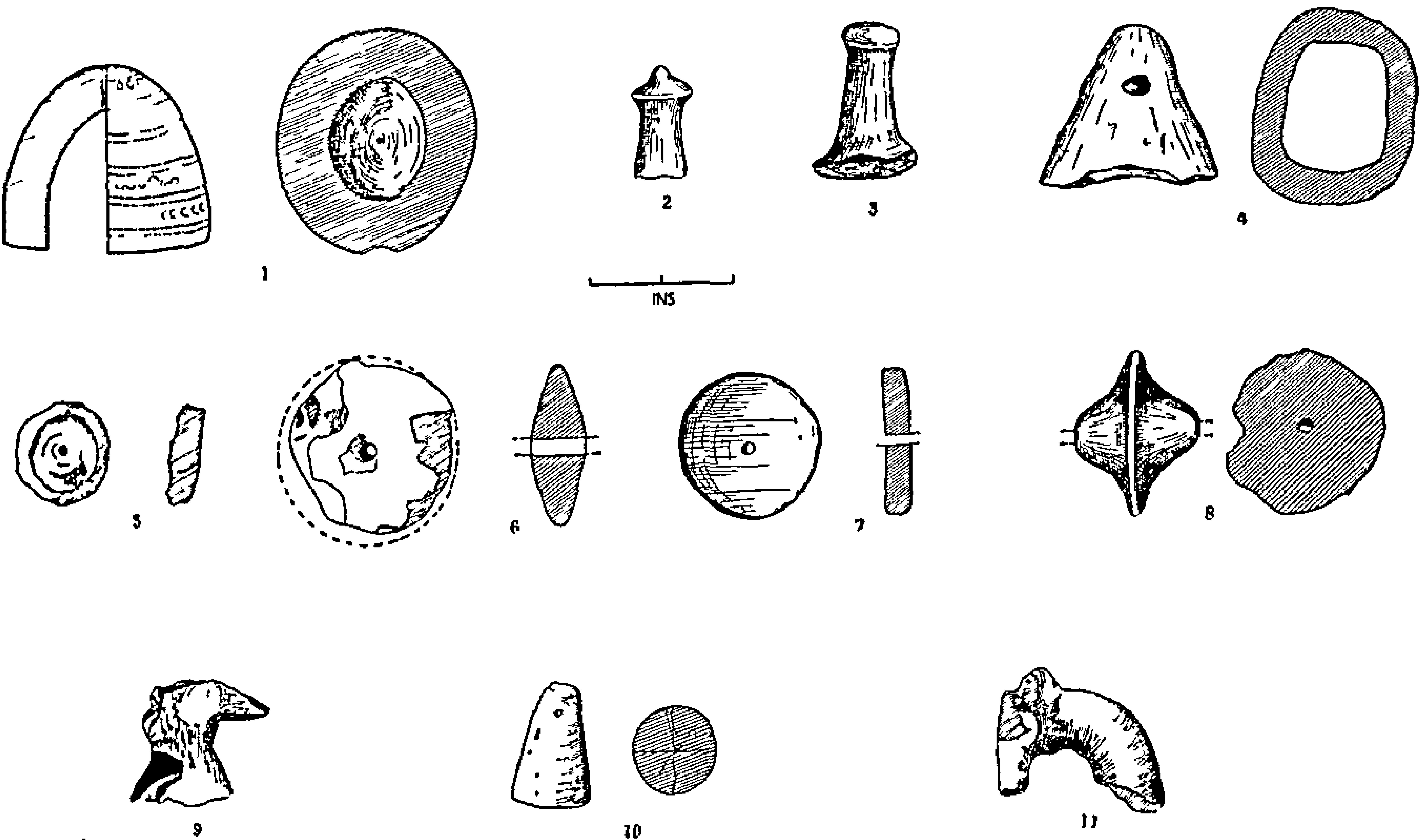


Fig 49 Stupa Terracotta Wheels and Miscellaneous objects
(*See pp 103, 105, 108*).

No. 8. A terracotta skin rubber of ashy black colour, slightly worn-out, with a boat-shaped outline and the outer surface having a partial hole at the top; there is a group of three parallel dotted lines along the outer surface enclosed by a pair of wavy incisions, the perforation is surrounded by a pair of concentric dotted incised circles and an irregular wavy design [Also pl. XXIII, No 5] Length of the base 84 mm, max breadth of the base 52 mm, thickness of the walls 15 mm, height 40 mm No 83, K.W.N A6 (X4) Period II

TERRACOTTA WHEELS

Twelve pottery and terracotta wheels out of which seven belong to layers of Period II, were recovered. These may be grouped under the following types :—

(1) With a double convex outline, and perforated : [No. 793, Period IIA].

(2) With an either curved or straight, elongated, rectangular cross-section with slightly rounded ends :

(a) Perforated [Nos. 228, 394, 409 : Period IIA—1; III-IV—2].

(b) Unperforated [Nos. 712, 873, 5057, X : Period IIA—1; III-IV—1 ; Unstratified 1].

(3) Similar to (2) but with one side having spiral-like embossed circles :

(a) Perforated [No. 282 : Period IIA].

(b) Unperforated [No. 154 : Period IIB].

(4) With a pronounced, rounded and holed hub on either side, [No. 117 : Period III-IV].

The following are illustrated [Fig 49]

No 5 A slightly worn out terracotta wheel with a small groove like depression at the circumference, one side having a linear spiral embossing around the centre, unperforated [Type 3b] Diameter 35 mm, max thickness 11 mm No 282, MG.N C(5) Period IIA

No 6 A well baked bi convex terracotta wheel with a red slip, worn out (circular) outline, and a neat circular hole in the middle [Type 1] Diameter 62 mm, max thickness 24 mm No 793, MG N E(5) Period IIA

No. 7 A terracotta wheel with a red slip, a hole in the centre, and worn out edges [Type 2a] Diameter 40 mm, thickness 6 mm No 394, MG.N E(4) Period IIB

No 8 A yellowish, well baked terracotta wheel broken at the edge, having a hole right through the rounded hub on either side, possibly a toy cart wheel [Type 4] [Also pl XXV, No 6] Diameter 53 mm, max thickness 37 mm, length of the hubs 24 and 19 mm No 117, MG.N. C(3) Period IV.

Terracotta Toys

Three specimens of these were found ; one from surface, one from the layer of Period IIB, and one from that of Period III-IV.

Ram

A terracotta ram with one leg and the mouth broken but with only the twisted horns in relief The whole body having a sort of a red wash, ill baked [pl XXV, No. 2] MG.N , surface

Elephant

Fig 50, No 3 — The specimen is of tiny size with only one of the hind legs intact, one fore leg almost half, while the rest two completely broken It belongs to the cast variety, it is solid and having a well marked protruding and tapering trunk with rough depressions near the temples to show the ears, the temples are well marked with a slight depression between them, the tail is lost, the legs do not seem to have been perfectly perpendicular but are slightly stretched so as to give stability when the toy is placed on the ground [Also pl XXV, No 4] Length of the body 37 mm , thickness 15 mm , length of the leg 14 mm , length of the trunk 17 mm MG N E(4) Period IIB

Indeterminate [Fig 50]

No 4 — A much broken fragment of a terracotta toy with the portion of the head completely broken as also of the legs , it has a flat back and the pair of hind legs is marked by a deep and medium broad groove which runs over the portion of the back also Length 72 mm , max thickness 75 mm MG N F(3) Period III IV

Terracotta Figurines

Fig 50 No 1 — Mother goddess, one fourth fragment, [48 mm broad, 71 mm long (high) 30 mm thick] showing the left hand and part of navel and abdomen and stunted left leg The figure was made in a double mould, baked and coated with a thin wash and smoothed Identical figure in terracotta found at Kolhapur (1945 46) and Tripuri (1952) (Also pl XXIV, No 2) Even though unstratified, since the figure has a close resemblance to the figure of a Mother Goddess found at Kolhapur[1], it may be assigned to Period II No 849, MG E N Unstratified

Fig 50 No 2 — Female figurine, upper half, (bust), rest broken, (36 mm long (high), 40 mm broad, 17 mm thick) The figure is solidly cast or made The eyes, lip, mouth, the head dress, neck ornaments, and arms are indicated by shallow incisions [Also pl XXIV, No 1] Length 34 mm , breadth 37 mm , thickness 17 mm No 822, MG N E(5) IIA

Terracotta Crucibles

Four terracotta crucibles with a blackish glossy enamel over both the inner and the outer surfaces were found Out of the four, two are smaller

1. Sankalia and Dikshit, *Excavations at Kolhapur*, pl XXI, A , also pl XXXIII, No 3 [reproduced from Kolhapur Report]



1



2



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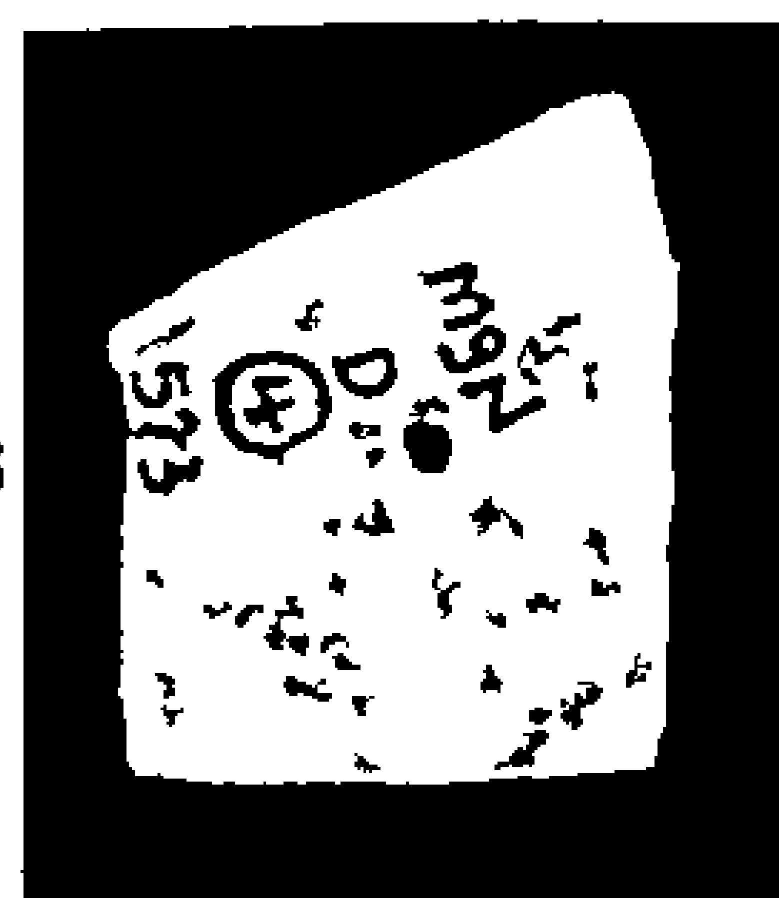
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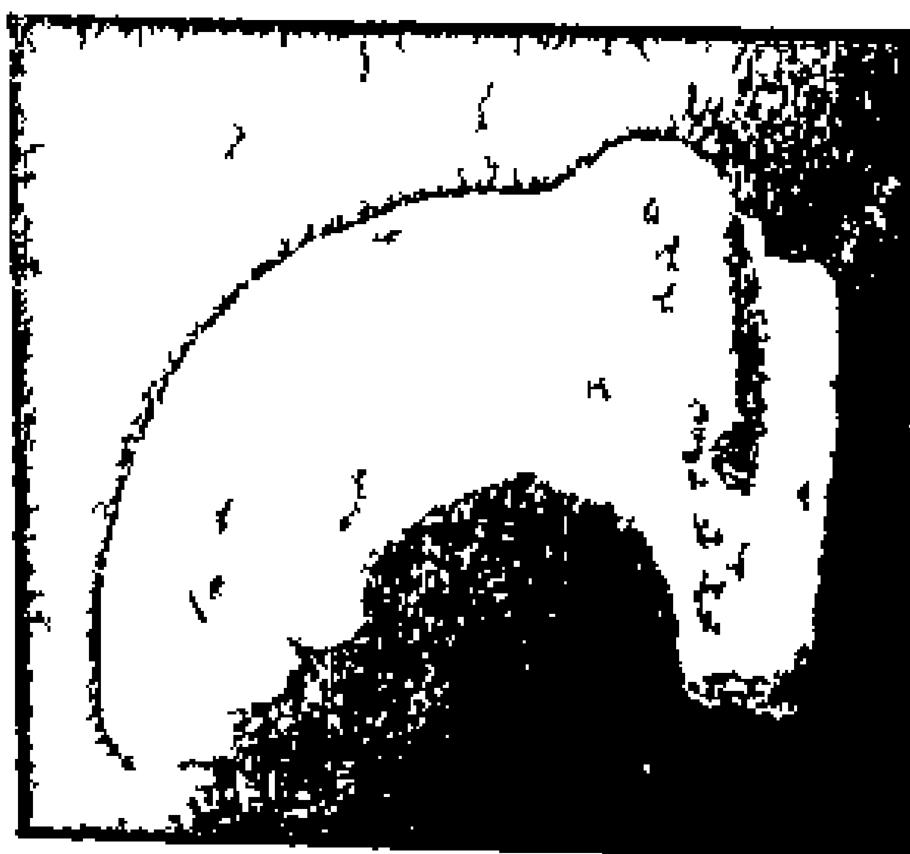
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Terracotta Figurines 1 and 2 (3 from Kolhapur) Kaoline objects (4-6) Period II-III

(*See pp 83-104*)

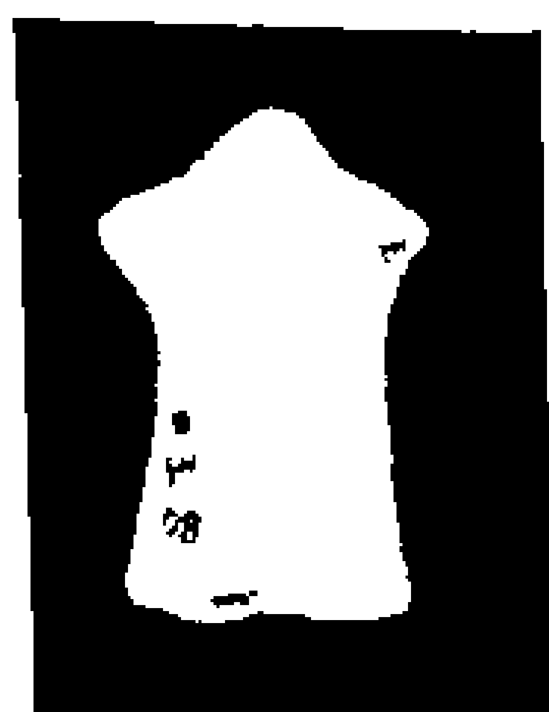


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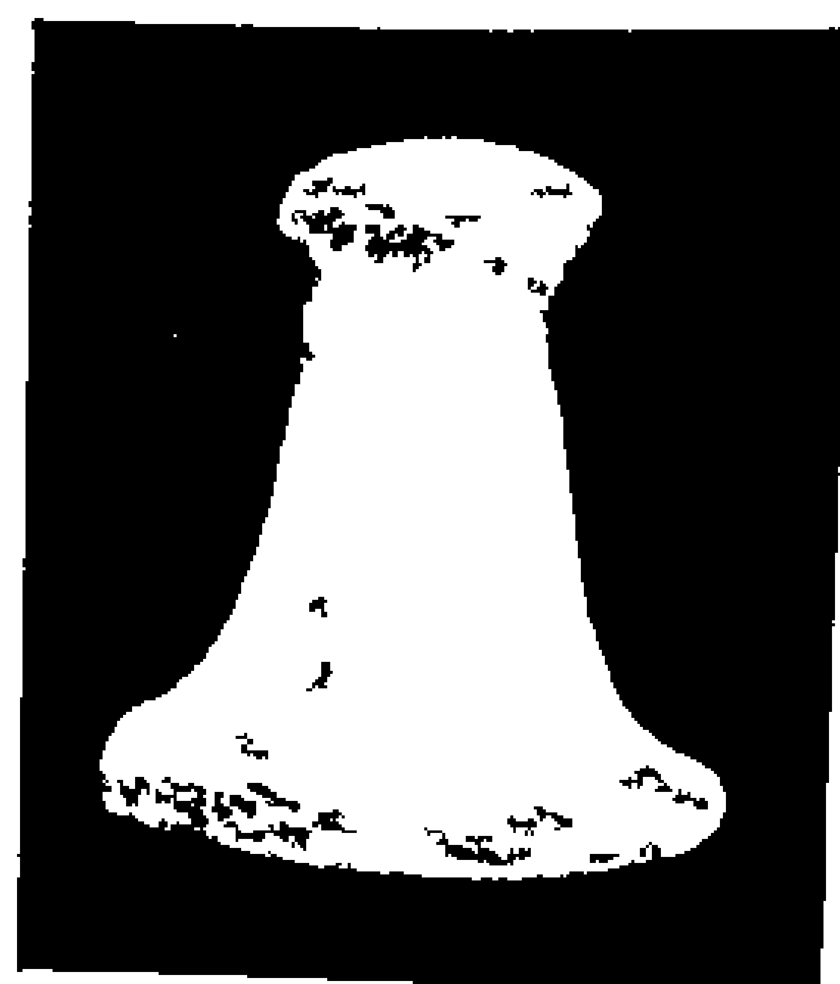




3



4



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7



8

Terracotta Toys (except Nos 3 5) Period II

(See pp 103 104 105 108)

and intact, and the other two bigger but much broken. One belongs to Period IIA, one to IIB and two to Period III-IV. The specimen from Period IIA is illustrated.

Pl XXII, No 9 An intact terracotta crucible with a rounded base; smaller in shape and thickness, the outer surface is smooth and enamelled while the inner one somewhat rough; the mouth is not circular but elongated on plan Height 43 mm, thickness 6 mm, diameters of the mouth 24 5 and 31 mm. No 876, MG N. C(5) Period IIA.

TERRACOTTA TOY-LIDS (?)

Among the terracotta objects was a group of six similar objects, some with horizontal projection at the top and some devoid of it, with a hollow inside, and appearing in some cases like a bell. The purpose of these objects is not clear but it may be that they were probably used as lids by children. All belong to Period IIA.

Fig. 49, No 9 A hollow reddish terracotta object with a horizontal projection existing on one side only at the top, the projection was probably used in lifting up the object which was possibly used as a lid Total height 42 mm, diameter of the base 37 mm, length of the projection from the centre of the top 31 mm No. 725, MG N. B(5) Period IIA

Two other specimens are illustrated in pl XXV, Nos 7 and 8

TERRACOTTA STUPAS

Two very interesting specimens of terracotta *stupas* were recovered from layer (4) of MG.N. Found in association with potsherds and querns bearing Buddhist symbols, these stupa models definitely show that the occupants of this phase had strong Buddhist affinities. Such small *Stupas*, it appears, have not been hitherto found elsewhere in India and that too in such early layers.

Fig 49, No 1 This is a semi circular specimen, having a hole at the top, and a series of groups of parallel dotted incisions around the outer surface, the gaps in between these decorations are filled with semi circles near the base and with somewhat pear shaped incisions near the apex [Also pl XXIII, No 3] Height 66 mm, diameter of the base 77 mm thickness of sides 18 mm No 563, MG N D(4) Period IIB

Pl XXIII, No 2 A much broken specimen but more in height and less broad based than the above, the outer surface has incised decorations as follows—three parallel dotted lines near the base, then dotted complete arches, then a pair of three dotted lines enclosing in between them a design of dotted diamonds, then dotted arches, then three lines above which there are shallow leaf like incisions, then come a series of four dotted circles around the hole at the top The incised dotted circles on the outer surface are not perfectly circular but are oblique, base thick but interior more hollow towards the top Height 72 mm, diameter of base 67 mm, max thickness at the base 18 mm No 563a, MG.N. A(4). Period IIB

Tile

A single complete specimen of a tile was recovered from K W.N. It is of a light red colour with some portions of it black due, probably, to uneven firing It is rectangular in shape, has two circular holes at one breadthwise end, and three broad and deep grooves along the lengthwise body so that the edge stands in relief At the back, but on the opposite edge, there is a shallow groove It seems that the edge in relief was fitted in the groove of the adjoining tile, and thus the whole group of tiles was fixed probably on wooden rafters near the roof of a house by inserting iron nails through the circular holes at the breadthwise end of the tile The tile when placed on the ground appears to be slightly convex, possibly to allow rain water pass rapidly over the tile through the grooves

Similar tiles were recovered at Kolhapur[1] where they could be ascribed to Satavahana period At Nasik it could be ascribed to Period III. The layers of Period II at MG N yielded a profuse quantity of nails which were, it can be surmised, used in association with such tiles

Pl XIV, No 7 A rectangular tile, with rough porous surface, contains many sand particles and pieces of straw used possibly as binding materials Length 252 mm breadth 160 mm thickness 27 mm, max breadth of grooves 22 mm No 95, K W N D2 (4) Period III

Stoppers

Among the terracotta objects found at Nasik, a group of thirty-eight roughly conical, cylindrical and disc-shaped objects was noteworthy A single specimen of a cylinder shaped bone piece was also recovered

Similar cones and cylinders made of terracotta, shell and stone were found at Mohenjodaro[1a], Chanhudaro[2], Harappa[3], Rairh[4] [Jaipur State] and Bahal[5] [Khandesh]

Such pottery cones were also recovered at Jemdet Nasr in Mesopotamia, besides at Ur and Abu Shahrin along with painted pottery[6].

1 SANKALIA and DIKSHIT, *op cit* pl XX B

1a MARSHALL *MIC*, Vol ii, pp 476, 478 9, Vol iii pl CXXX, Nos 8 27 9, 33; CXXXI, 42, 47 55, CXXXIV, 8 20, CLVI 19

2 MACKAY, *Chanhudaro Exc* p 171, For Taxila, See J MARSHALL, Vol ii, p 428

3 *Anc Ind*, No 3, p 120, pl L Nos 6 10

4 PURI, *Exc at Rairh*, pl XXI No 25

5 Information from Shri M N DESHPANDE, Supdt, Deptt of Arch W C

6 MARSHALL *Taxila*, Vol ii p 478

Scholars are not unanimous regarding the use of these objects. For instance, MACKAY remarks that "in Sumer, cones........ were used in large numbers to decorate the walls. Pottery cones were inserted in mud-brick walls as far as their broader ends, which were painted in various colours. This mode of decoration was particularly well developed at Uruk, where columned walls are covered with a mosaic of pottery cones in black and red"[7]. MARSHALL, in some cases, points out the resemblance of cones from Mohenjodaro with "the phallic object [Lingam] of the Hindus[8]". MACKAY, however, discounts this view and suggests that they might have been "used in some kind of game......perhaps to be knocked down by the little pottery balls frequently found at Chanhudaro[9]". PURI, on the other hand, upholds the possibility of the perforated specimens beings used as neck-beads for animals[10].

From their rough appearance and tapering or disc-like shape it may be suggested that these objects were probably used as stoppers for bottles inasmuch as even in modern times corks of similar shape can be had. It may be added further that these terracotta stoppers, since some of them have a shallow depression or groove in the middle portion, suggest the existence of terracotta containers [or bottles] which, however, were not found at Nasik.

Out of the thirty-eight stoppers, seventeen were found in layer (5), six in (4), ten in (3), two in (2), a single in (1) of MG.N, and two were unstratified. This suggests that such stoppers were in use at Nasik more in Period II represented by layers five and four—than in Periods III and IV.

These stoppers can be divided into the following categories —

(a) With a conical top and flat base [Pl XXII, Nos 2,6,7]
Total 5 Periods IIA, 4, IV, 1.
Max. Height 45 mm Min 24 mm Max. diameter 48 mm Min 13 mm

(b) Conical with a truncated top and a flat base [Pl XXII, Nos 1,8]
Total 16 Periods IIA, 8, IIB, 5, IV, 3
Max height 47 mm, Min 19 mm, Max diameter 36 mm, Min 3 mm

(c) Perfect cylinders [Pl XXII, Nos 3,5]
Total 9 Periods IIA, 4, IIB, 1, IV, 2, 2 unstratified
Max height 38 mm, Min 19 mm, Max. diameter 40 mm, Min 21 mm

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7. MACKAY, *op cit*, 1935 6, p 171

8 MARSHALL, *op cit*, Vol ii, p 476

9 MACKAY, *op cit*, pp 172 3

10 PURI, *op cit*, p 45 "As regards the other variety (i e those without perforation) it is likely that these were used in some sort of game."

(d) Flat cylindrical discs [Pl XXII, Nos 12, 13]
Total 7 Periods IIA, 1, IV, 6
Max thickness 23 mm, Min 12 mm, Max diameter 65 mm, Min 27 mm

(e) With a flat top and a concave grooved body [Pl XXII, No 4]
Total 1 Period IV
Height 21 mm, Diameter 26 mm

Terracotta Miscellaneous Objects

A number of sundry terracotta objects was recovered On account of the singular nature of each specimen, they could not be grouped or classified Some of these are illustrated in Fig. 49.

No 2 A terracotta object, most probably a gamesman but with the base broken [Also pl XXV, No 3]
Height 39 mm thickness 21 mm No 5098, MG N B(5) Period IIA

No 3 A solid terracotta object, broadening towards the base and with a rounded top possibly a dabber [also pl XXV No 5]
Total height 53 mm, breadth of base 36 mm No 5098A No details

No 4 A conical greyish hollow terracotta object with a rounded top, and having a hole at a distance of 25 mm from the top, of indeterminate use
Total height 64 mm, thickness 8 mm, diameter of the existing base 63 mm
No 609, MG N D(5) Period IIA

No 10 A conical flat based terracotta object with the smooth base having a pair of incised lines forming a + sign, the top is truncated and has a hole below it probably to pass a thread through it so that the piece should serve the purpose of a pendant
Height 40 mm Diameter of the base 29 mm No 5891, MG E N I(1) Period IV.

No 11 A terracotta curved fragment of a handle, much worn out, the broader end has a smooth rectangular surface probably due to that side being stuck to a pot [Also pl XXV, No 1] Thickness 17 mm, height of the broader end 43 mm, breadth of the broader end 24 mm, diameter of the rounded end 13 mm
No 844, MG N C(5) Period IIA

X

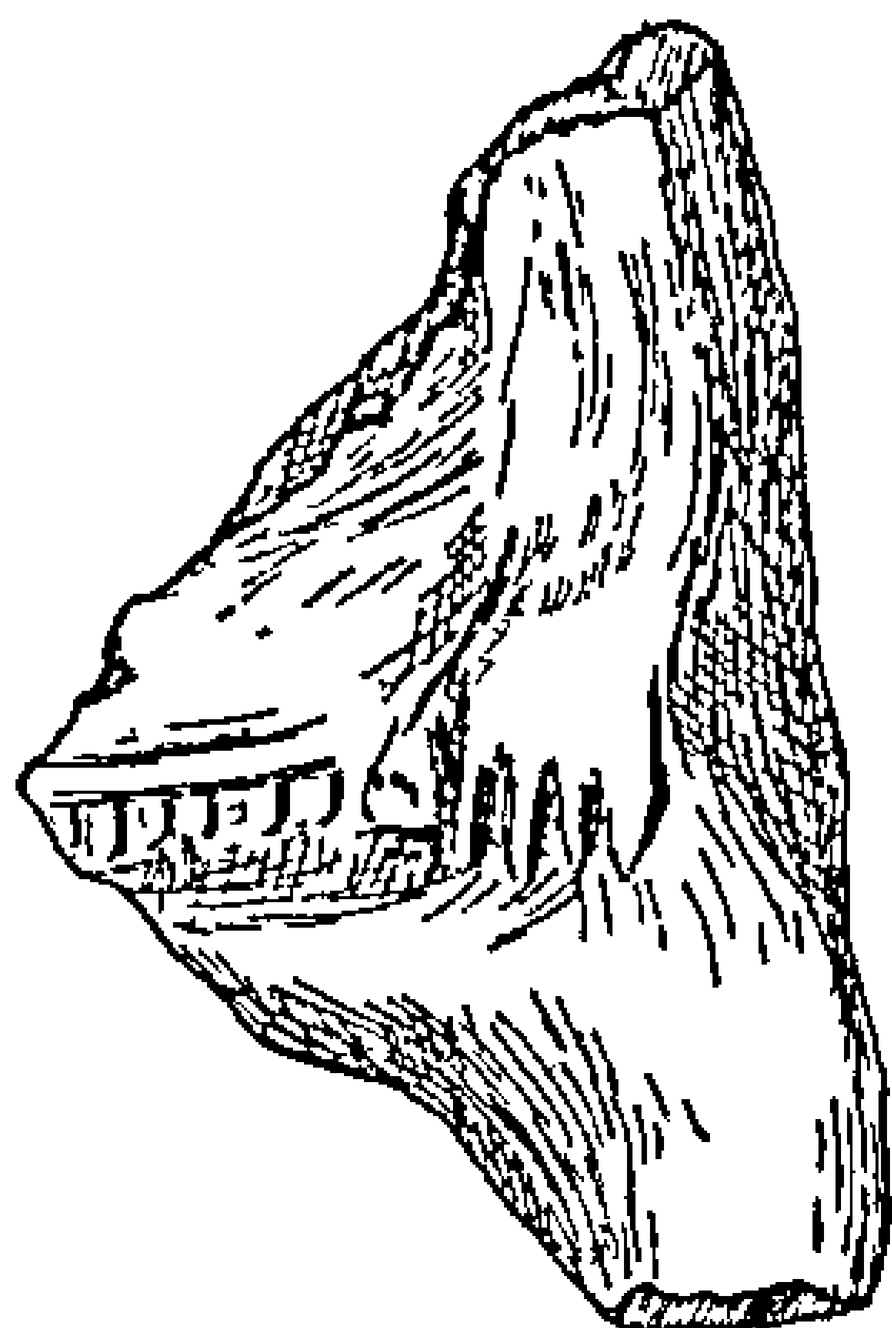
COPPER OBJECTS

Besides a ew coins, other objects of copper were not much. These include Kohl sticks, a copper dish, a bangle, a ring, and an unidentifiable object, probably a handle All these are described and a few illustrated

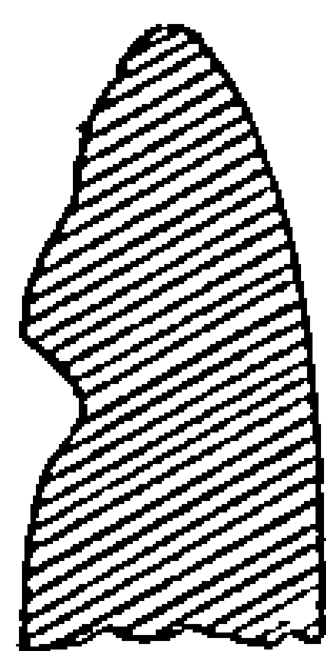
No 871 Thin cylindrical copper rod gradually tapering into a rounded end the other end is broken Probably a Kohl stick 67 mm long, 3 to 5 mm thick MG E N Ie(3)

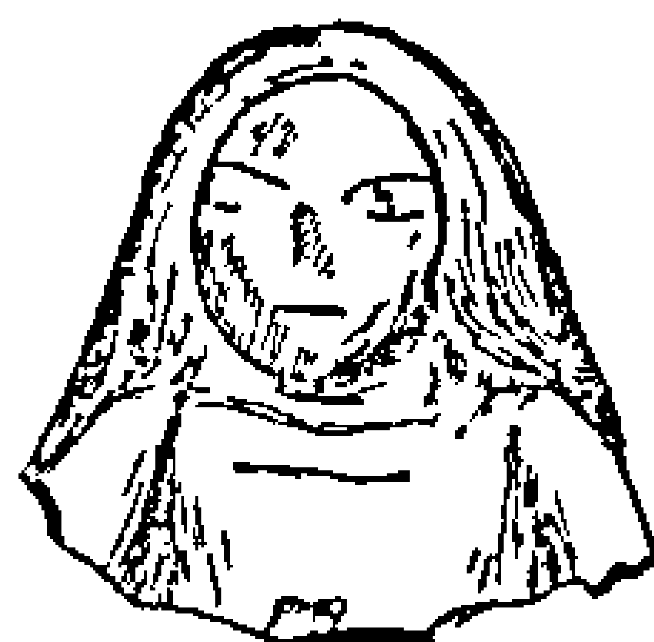
No 469 Thin cylindrical copper rod, slightly thicker and rounded at either end Probably a Kohl stick 117 mm long between 1 and 3 mm thick MG N B(4) [Fig 51,c]

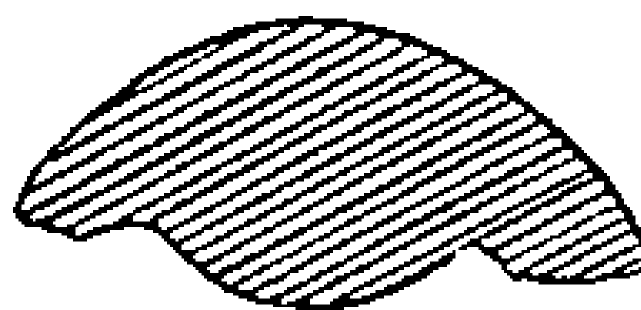
No 600 Pieces of hollow copper rod, still rusted, as they would not stand full treatment 62 mm long, MG N D(4)



1

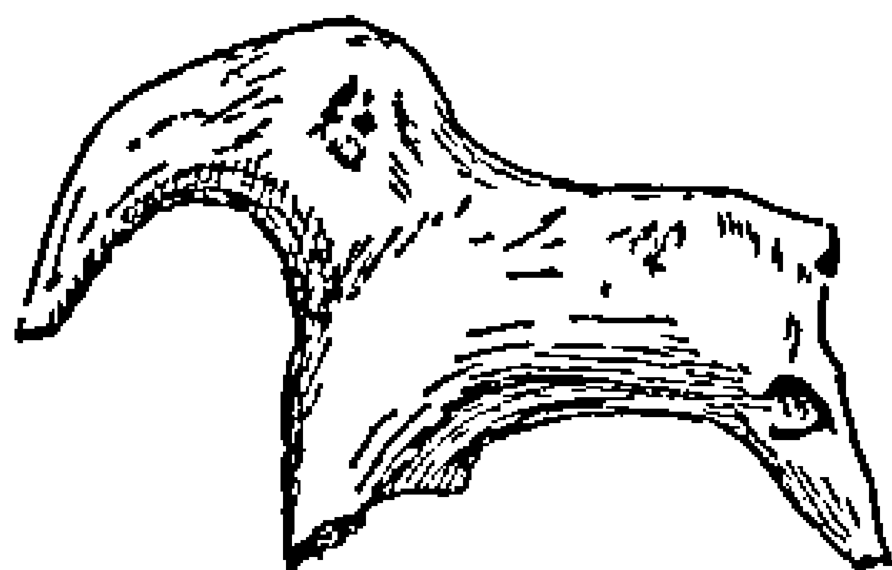




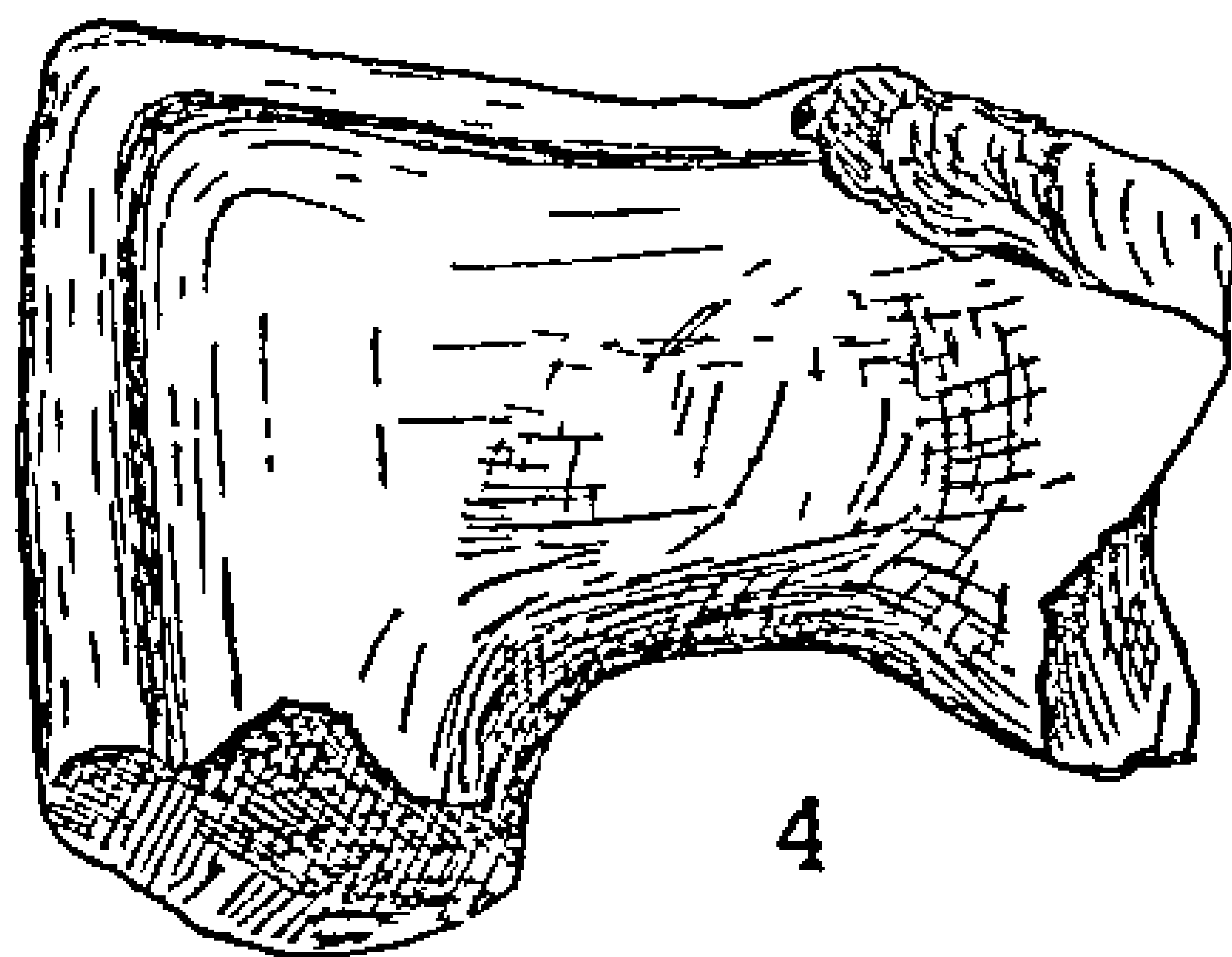


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Fig 50 Terracotta Figurines and Toys

(See p 104)

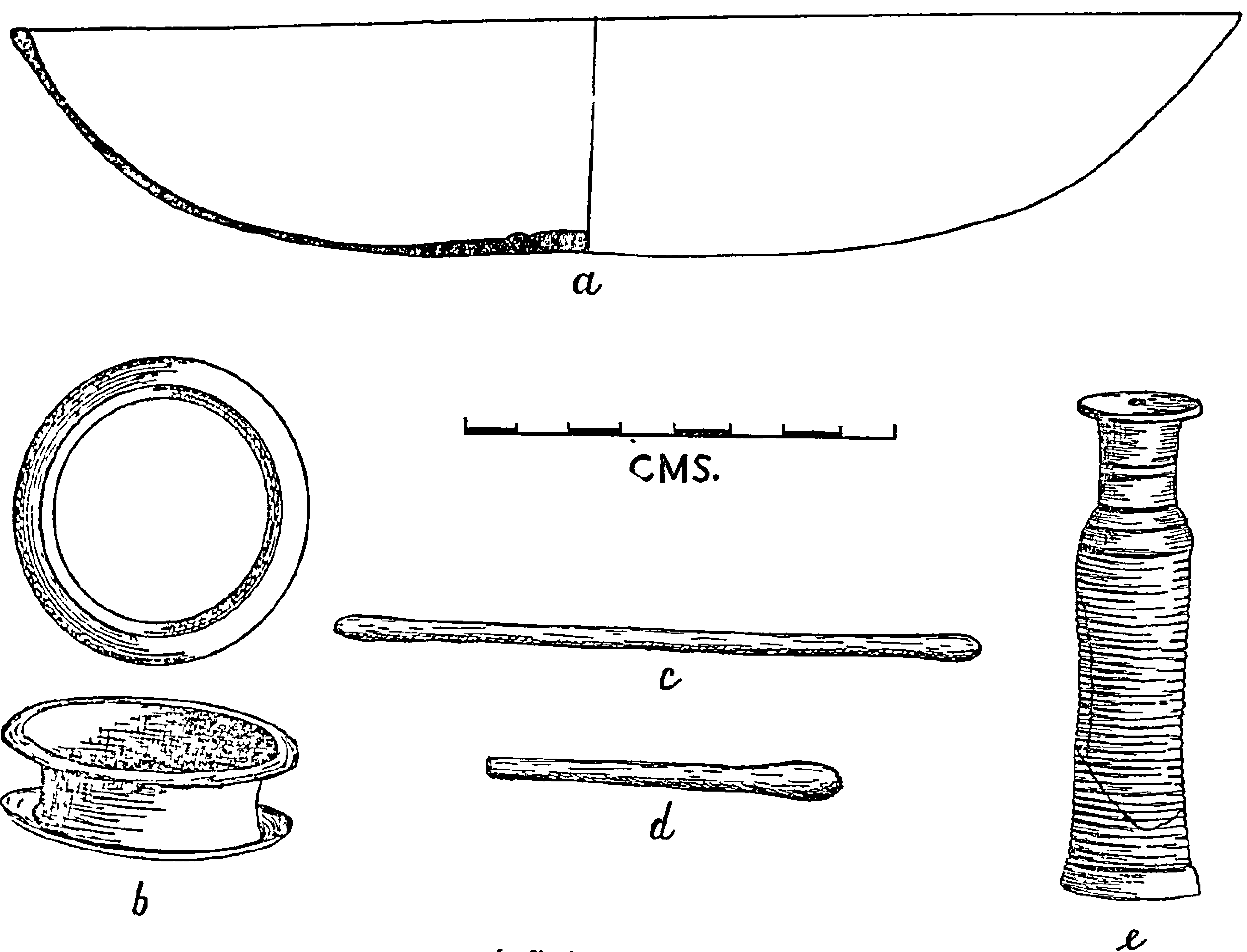


Fig 51 Copper objects
(See pp. 108-109)

No 144 Thin cylindrical copper rod—not cleaned Probably a Kohl stick 117 mm long, MG N A(4)

No 375 Thin cylindrical copper rod, beaten at one end by accident, broken at the other end About 80 mm long MG N D(3)

No 471 Thin copper rod, perhaps broken at one end 55 mm long, 1 mm thick MG N. B(4)

No 337 Thin cylindrical copper rod, pointed at either end About 140 mm long MG N D(2)

No 145 Thin cylindrical copper rod, rounded at either end Kohl stick 96 mm long, MG N G(2)

No 696 Thin cylindrical copper rod, rounded at both ends Probably a Kohl stick 83 mm long MG S N (2)

No 495 Fragment of an inverted rim through which a copper wire runs round The rim had holes for suspension The outside of the vessel was decorated with 'a dot and circle' decoration MG N B(5)

No 473 Copper ring, with a central oblong flat surface Diameter (inner) 17 mm MG N. Unstratified

No 472 Copper bangle or large ring with a deep, broad groove on the circumference (or with raised borders) Probably this was inlaid or wound with silver and gold threads Similar type found in glass Diameter 55 mm, inner 45 mm MG N C(5) 12 feet 8 inches Found with a saddle quern below 2nd floor level [Fig 51, b]

No 481 A stand or handle like cylindrical object, broken in 4 pieces with tapering ends having flat surfaces Possibly the end is slightly broader at the butt end or at the base, and the narrower, with a hole for insertion the front or the top end There is a broad, deep groove below this The whole is marked by thin grooves all over the body 90 mm long, diameter, base 23 mm, top 21mm MG N B(5) [Fig 51, e]

No 652 Thin, shallow copper dish, with broad flat base, and flaring sides Completely rusted with beautiful green patina and in pieces though found partly intact MG S N (3) [Fig 51, a]

XI

IRON OBJECTS

Comparatively a large number of iron objects was recovered The list given below indicates a variety of objects of domestic and non-domestic use :

> Arrowheads 13, Caltrops 2, Spearheads 2, Choppers 3, Tang fragments 11, Axe blade 1, Drill 1, Chisel 1, Cup 1, Rings 5, Nails 40, and indeterminate 6

Nearly ninety per cent of these came from the two phases of Period II, and quite a large number was heavily encrusted [1]

1 Unfortunately, many of these heavily encrusted objects crumbled to pieces in transit inspite of utmost precautions The labels containing their stratification details were also lost The loss, however, could be made good by taking resort to the Antiquity Register

Objects like the caltrops, arrow-heads, choppers, spearheads, axe, drill and others found in the trench MG.N. should normally indicate the nature of the occupants. The large number of storage jars suggested that the occupants might be dyers. But these and other associated objects indicate that the occupants were persons who were concerned either with the preparation of tools and weapons (as ironsmiths) or with fighting (as soldiers).

Arrowheads

Of the thirteen specimens, five came from layers of Period II, three from Period IV and in the case of five, details could not be had.

In all, five types are available :[2]

(a) Blade with a diamond-shaped section 1,
(b) Leaf-shaped blade 6,
(c) Triangular blade 4,
(d) Horn-shaped projections 1,
(e) Indeterminate 1.

Out of the six leaf-shaped specimens two belong to Period IIA, two to Period III-IV and two lack stratificational details.

The same is true of the triangular blade variety.

The variety with a diamond-shaped cross section and a tapering tang belongs to Period IIB, while in the case of the arrowhead having a crescent-shaped projecting head, details are lost.

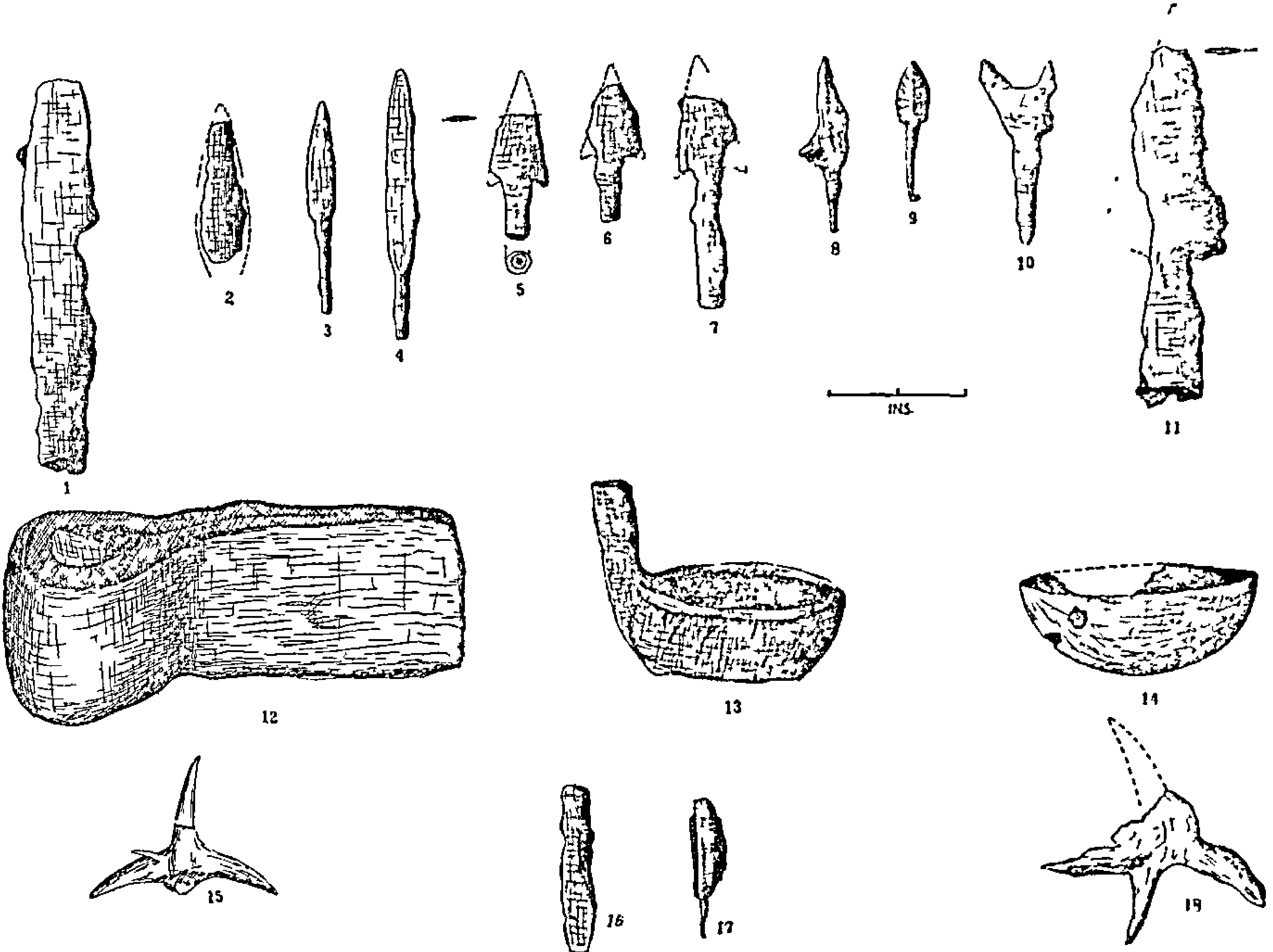
Out of these thirteen, as many as nine were with tangs, three with sockets and one heavily encrusted fragment is beyond recognition. Arrowheads with sockets are generally taken to be older than those with tangs. Their distribution is as follows :—

Out of nine with tangs :—
4 can be assigned to Period II and
2 can be assigned to Period III-IV.
3 must remain indeterminate.

Out of three with sockets :—

One belongs to Period III-IV, and two are of an indeterminate period.

2. On account of heavy rust forming deformed outline it was not possible to have exact cross-sections. This, therefore, is a rough classification.



Fg 52 Arrowheads Axe, Lamps Spearheads, Caltrops, Chisel and Drill
(See pp 111, 112, 114)

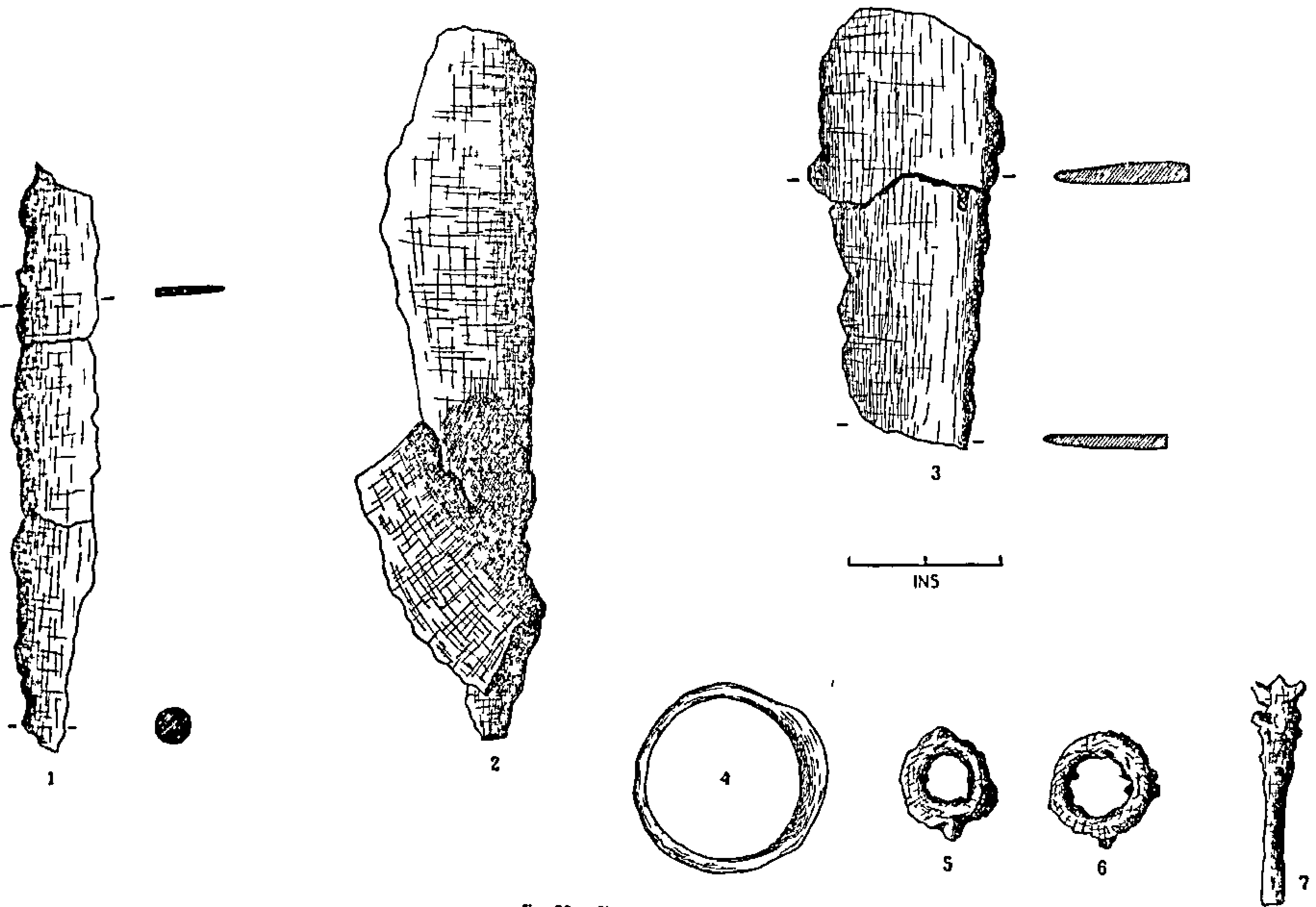


Fig 53 Choppers and Rings

(*See pp 112, 113, 116*)

The nine illustrated varieties are as follows [Fig 52] —

No 2 A fragment of probably a leaf shaped arrrowhead with both the tip and the end broken, possibly having a tang Length 54 mm, breadth 18 mm No 605, MG N D(5) Period IIA

Cf Petrie, *Tools and Weapons*, pl XLII, No 191

No 3 An elongated leaf shaped, tanged, arrowhead with a thin blade, cylindrical tang and an elliptical cross section of the blade [Also pl XXVI, No 1] Length 81 mm and breadth of the blade 12 mm, length of the tang 35 mm, diameter 3 mm No 91 K W N C4(1) Period III-IV

Cf Petrie *op cit*, pl XLI, No 30

No 4 Similar to No 3 but with a more elongated blade and a short tang with a squarish cross section Total length 102 mm, length of tang 22 mm thickness of tang 4 mm breadth of the blade 12 mm No details available [Also pl XXVI, No 2]

Cf Petrie, *op cit*, pl XLI, No 30 but without a knob or ring round the tang

No 5 A socketed arrowhead with a triangular blade having concave shoulders, broken tip cross section of the blade elliptical and that of socket circular [Also pl XXVI No 3] Total length 47 mm, length of blade 25 mm, breadth 22 mm, diameter of socket 9 mm No 682 MG S N (3)

Cf Petrie *op cit*, pl XLI, 112 and *Anc Ind*, No 5, Fig 10, No 18, p 94, Sisupalgarh

No 6 Similar to No 5 above, but with a shallow socket [Also pl XXVI, No 4] Length 51 mm, length of blade 26 mm, breadth 21 mm diameter of socket 7 mm Details lost

Cf Petrie *op cit*, pl XLI, 117, 112, 10, 104, pl XLII, No 216

No 7 Similar to No 5 but with a longer socket [Also pl XXVI, No 5] Total length 81 mm, length of blade 28 mm, (breadth 23 mm) length of tang 53 mm, diameter 10 mm Details lost

Cf Petrie, *op cit*, pl XLI, No 117

No 8 A tanged arrowhead with probably a triangular blade having a diamond shaped cross section, and a tapering tang [Also pl XXVI No 6] Length 64 mm, length of tang 25 mm, breadth of blade 18 mm No 291, MG N A(4) Period IIB

Cf Petrie, *op cit*, pl XLI, 151

No 9 A tanged arrowhead with slight shoulders, the tapering blade or head having four faces and a diamond shaped cross section [Also pl XXVI, No 7] Total length 53 mm, length of tang 30mm, breadth of the blade 12 mm max thickness 10 mm No 82, K W N A6 (X3) Period II

Cf *Anc Ind* No 5, p 94, Fig 10 No 20, Sisupalgarh

No 10 A heavily rusted tanged iron object—most probably an arrowhead—with two horn like pointed projections forming a crescent like concave head [Also pl XXVI, No 15] Total length 59 mm, distance between two horns 26 mm No details

Cf Petrie, *op cit*, pl Nos 166 7

Spearheads

Only two spearheads were found, out of which one could be ascribed to Period II In the case of the other, no details could be had Both are socketed [Fig 52]

No 1 A fragment of a spearhead with one end developing into a rounded socket and the other i e, the tapering leaf shaped blade having an elliptical section [Also pl XXVI, No 10] Length 151 mm, max breadth 34 mm, diameter of socket 20 mm No 197a, MG N A(5) Period IIA

Cf PETRIE, *op cit*, pl XXVII, No 45

No 11 A fragment of a spearhead having probably a triangular blade with projecting shoulders and a cylindrical socket [Also pl XXVI, No 14] Length 127 mm, breadth 33 mm, diameter of socket 19 mm No 198 No details

Cf PETRIE, *op cit*, pl XXXVII, No 4

Caltrops

A pair of caltrops was one of the most notable finds at Nasik. After Sisupalgarh,[1] it is the second site to yield these objects of warfare, and would take their antiquity earlier by at least four centuries

Caltrops were spread on the road with the purpose of offering an obstruction to the progress of the horses and elephants of enemies According to Dr WHEELER, " Caltrops occur on the Roman military sites of the early centuries A D in Western Europe ". They were also used in the First and the Second World Wars [2]

Though caltrops at Sisupalgarh have been ascribed to c A D 200-300, at Nasik they were recovered from Layer (5) which is assigned to Period IIA, that is between 200-300 B C Another point to be noted is that the Nasik specimens, unlike those at Sisupalgarh, have perfectly tapering and sharp pointed spikes Inspite of this feature, when thrown on the ground they rest on it with one spike always pointing upwards [Fig 52] ·

No 15 A heavily rusted caltrop with three radiating spikes intact and one broken [Also pl XXVI No 8] Length of the spikes 26 32 and 33 mm, thickness 8, 10 and 11 mm No 5100 MG N E(5) Period IIA

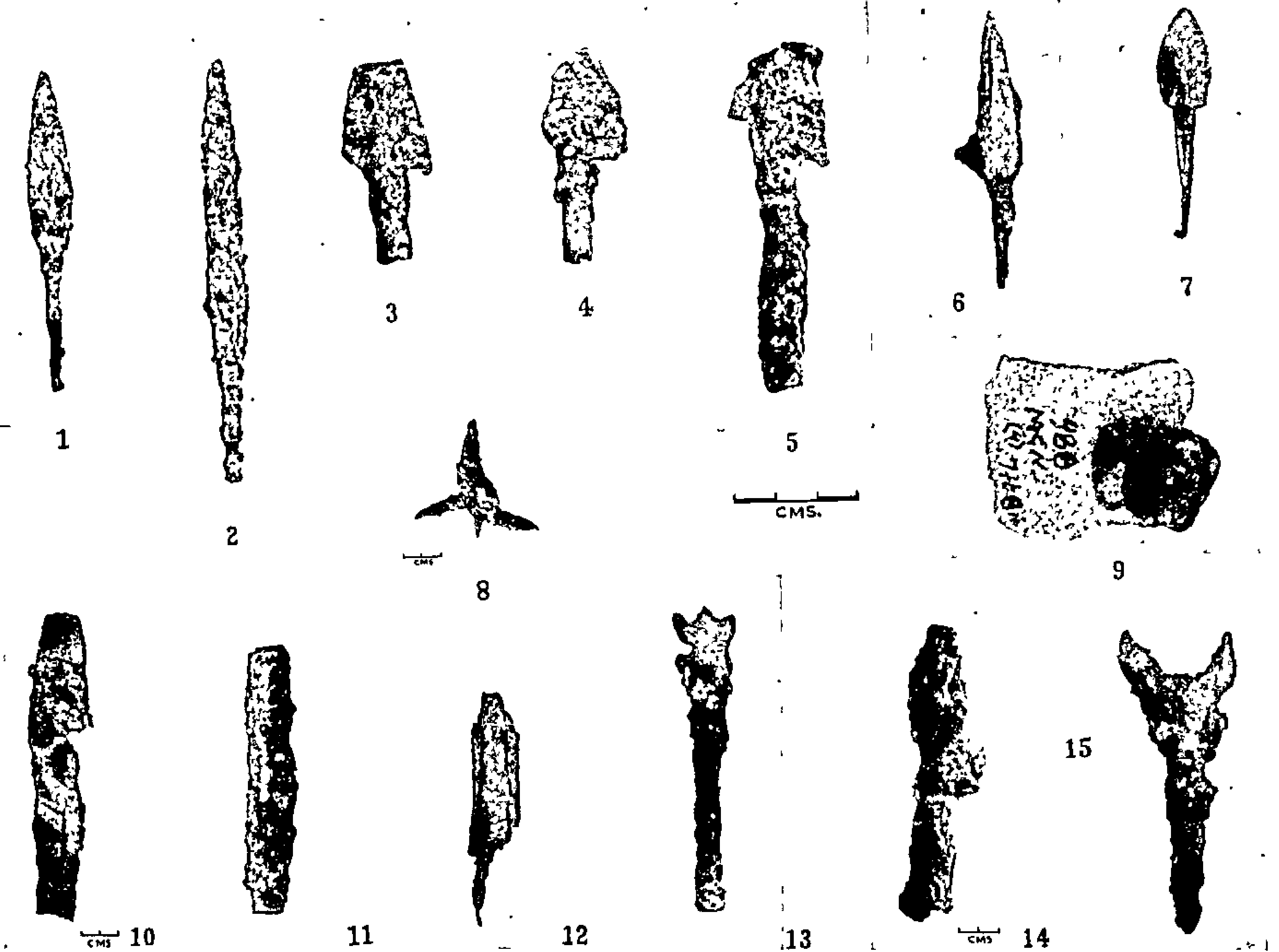
No 18 Similar to above but somewhat bigger and with only two spikes intact Length of the spikes 41 and 43 mm, thickness 12 mm No 5100a MG N E(5) Period IIA

Choppers

Three specimens, most probably of choppers with broad blades and indicating tangs were recovered Two belong to Period IIA, the third is without details [Fig 53] ·

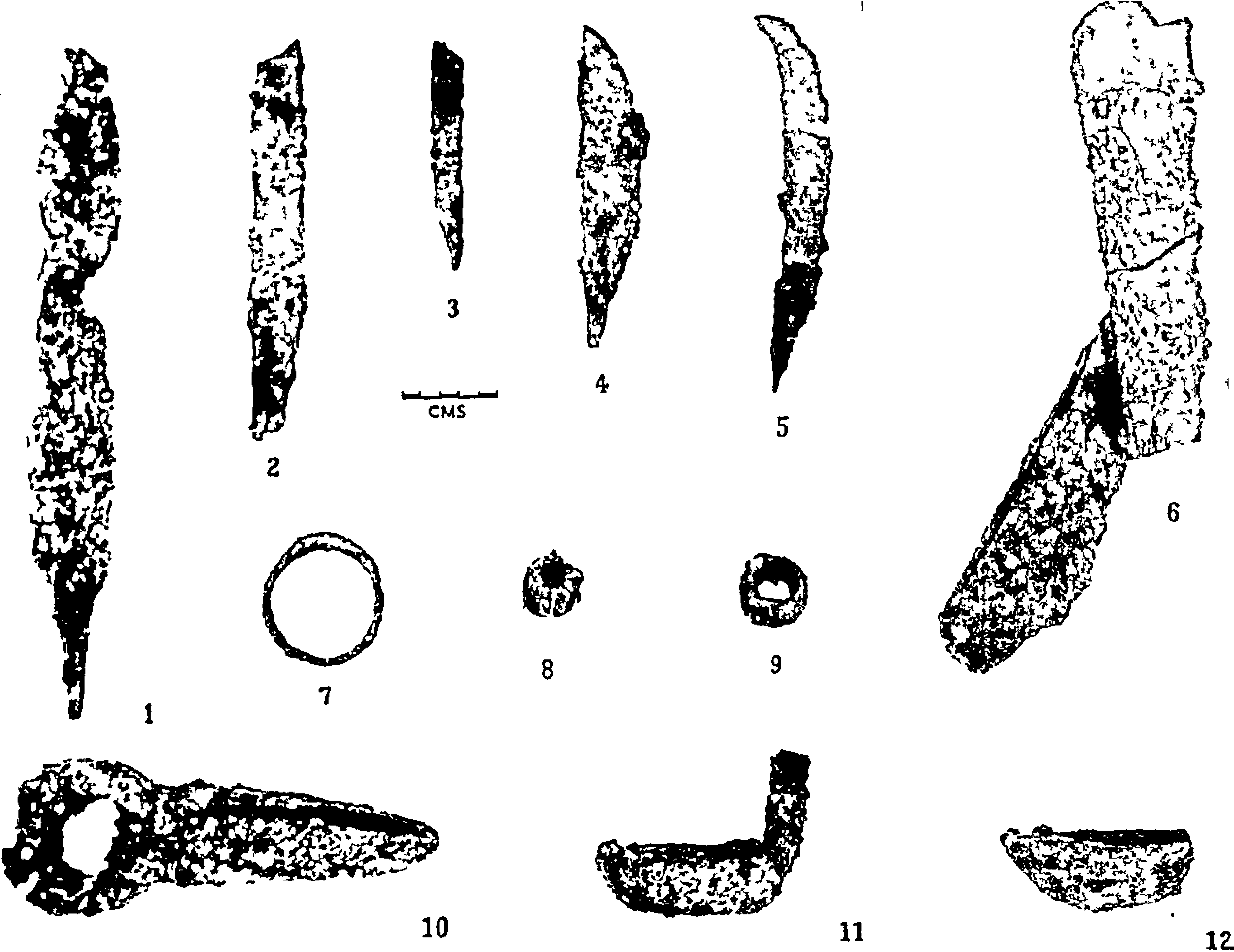
No 1 A heavily rusted piece with less breadth, elongated triangular cross section, and only a portion of a round socket remaining [Also pl XXVII, No 2] Length 198 mm, breadth 31 mm thickness of blade 10 mm, diameter of the socket 16 mm No 174b MG N

1 *Anc Ind* No 5 Jan 1949, p 91, also p 94 Fig 10, No 32
2 *Ibid*



Iron weapons (except No 9, which is a potsherd with iron handle (?)) Period II.

(*See pp. 111, 112, 114*)



Iron objects (7–12) and weapons (1–6) Period II

No 2 A heavily encrusted, broken piece of a chopper with only the tapering portion suggestive of a tang the latter has a rectangular cross section while the blade has a slightly elongated triangular cross-section, on one side of the blade a fragment of possibly another chopper blade is embedded due to rust [Also pl XXVII, No 6]

Major piece Length 236 mm Breadth 54 mm

Minor piece Length 88 mm Breadth 41 mm

No 174, MG N A(5) Period IIA

No 3 Only a fragment of a chopper blade similar to above Length 135 mm Breadth 56 mm No 627, MG N D(5) Period IIA

Knives

Out of the nine specimens recovered, only three are intact and the rest fragmentary. In the case of three no details could be had, while all the remaining six belong to Periods IIA and B

On account of heavy encrustation, it was difficult to ascertain the exact shape of many of these specimens, but a curved blade with a rectangular tang seems to have been the common type [Fig 54]

No 1 An intact and long blade, probably of a long knife with a comparatively short tang and a rounded tip, the blade has an elliptical tr angular cross section [Also pl XXVII, No 1] Length 340 mm, breadth 47 mm No 90h No details

No 2 A heavily encrusted knife blade plano convex in outline and with an elongated triangular section, tang partly broken [Also pl XXVII, No 4] Length 156 mm, breadth 35 mm No 90, K W N B(6) (x) Period II

No 3 A broken fragment of a knife blade with the tip broken and the tang intact, cross section indeterminate due to crust [Also pl XXVII, No 3] Length 150 mm, breadth 17 mm No 90c No details

No 4 Heavily encrusted concavo convex knife blade with an upturned tip and a short tang [Also pl XXVII No 5] Length 193 mm breadth 25 mm No 90a MG N A(5) Period IIA

Cf SANKALIA and DIKSHIT, *Excavations at Kolhapur*, Fig 26 p 127

No 5 A broken part of a knife blade with both the tip and the tang broken cross section elongated triangular

Length 95 mm breadth 24 mm No 90b MG N D(4) Period IIB

The unillustrated specimens are four—all fragments of tips of knife blades Out of these, three came from Layer (5) i e Period IIA, and in the case of one details are lost

Tang Fragments

Eleven tang fragments were found, out of which eight belong to layer (5), one each to layers (4) and (3), and one lacks details Tanged blades, therefore, seem to be a feature of Period II

Axe [Fig. 52]

Its shape exactly resembles a modern one

No 12 A heavily rusted, socketed, iron axe with a transverse break at the socket [Also pl XXVII, No 10] Length 192 mm , length of blade 130 mm , thickness 43 mm , max breadth 68 mm , outer diameter of socket 65 mm , thickness 19 mm , breadth 54 mm No 194, MG N C(5) Period IIA
Cf PETRIE, *op cit* , pl IX, No 14

Drill [Fig 52]

No 17 A heavily rusted drill with probably a round body and a sharp tapering point [Also pl XXVI, No 12] Length 54 mm , thickness 11 mm No 879a, MG N E(5) Period IIA
Cf PETRIE *op cit* , pl XLV, No 36

Chisel [Fig. 52]

No 16 A heavily rusted specimen with a circular section at the top, and with the end bevelled and flattened to a straight sharp edge [Also, pl XXVI, No 11] Length 63 mm , thickness 10 mm No 879, MG N C(5) Period IIA
Cf PETRIE, *op cit* , pl XXII, No 78

OBJECTS OF HOUSEHOLD USE

Besides tools and weapons, were found a lamp or a ladle, an iron cup and iron nails The lamp belongs to Period IIA and was found in a big storage jar. In the case of the cup, details are lost.

Lamp or Ladle [Fig. 52]

No 13 A heavily rusted shallow, flat based cup like iron object with a broken vertical handle having a rectangular cross section, on the margin of the cup opposite to handle there is a broken facet which perhaps indicates the wick projection (if the object is taken to be a lamp) or a projection for pouring (if it is a ladle) [Also pl XXVII, No 11] Outer diameter of the cup 91 mm breadth of the sides of the cup 28 mm , length of the handle 40 mm breadth 19 mm thickness 8mm No 426a, MG N B(5) From the second eastern storage jar (Ranjana) Period IIA

Cup or Ladle [Fig 52]

No 14 A heavily rusted partially broken iron cup (probably a part of ladle) with two perforations which might have been used for revetting [Also pl XXVII, No 12] Diameter 87 mm , thickness 4 mm , height 36 mm No 425a No details

Iron Rings

Five specimens of these were found, out of which three were intact and two fragmentary. They seem to have been current in Periods II to IV. [Fig. 53].

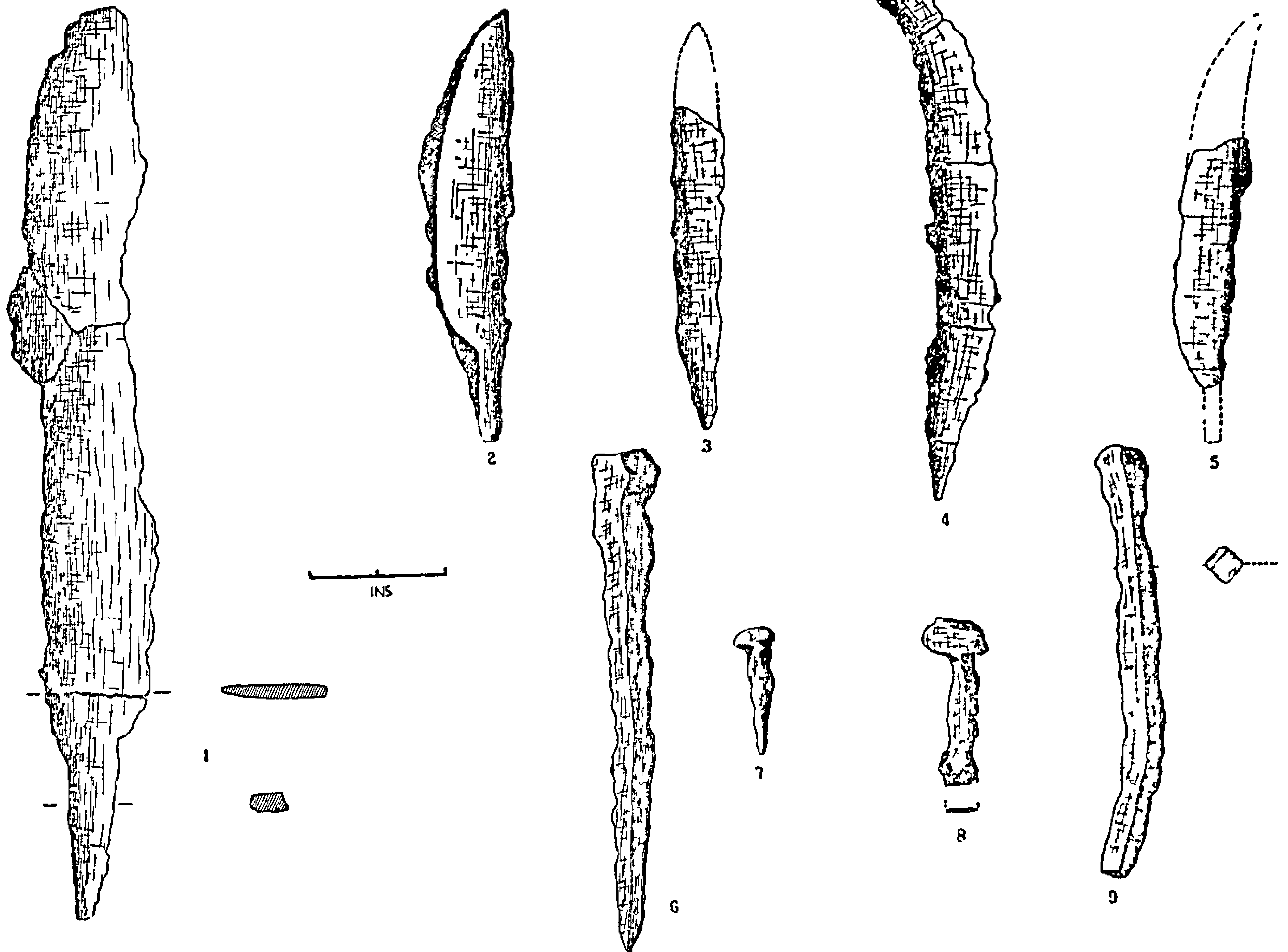


Fig 54 Knives and Nails

(See pp 113 115)

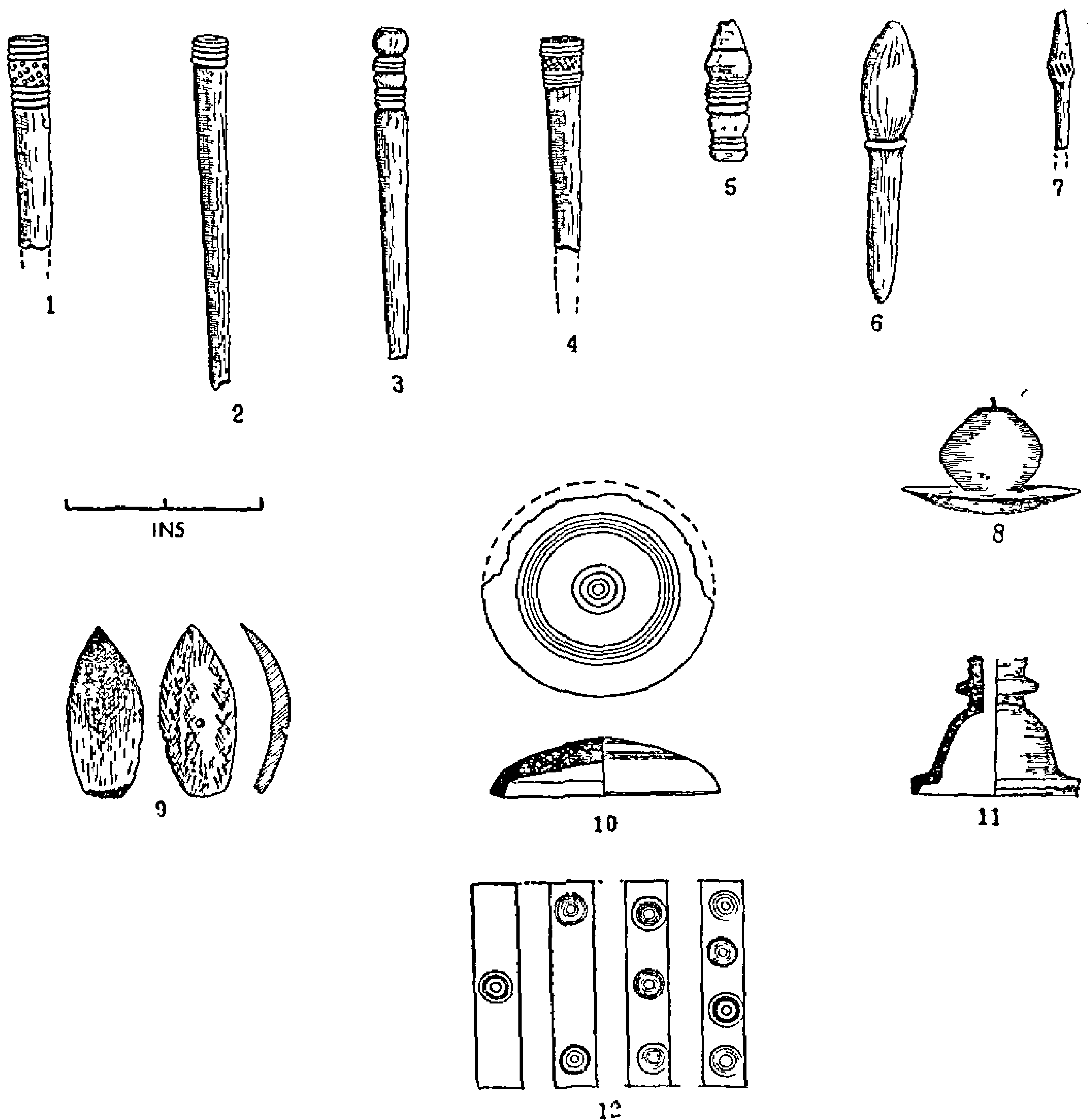


Fig 55 Kohl sticks Steatite objects, Ivory dice
(See pp 119, 120, 121)

No 4 A heavily rusted iron ring (may be a bangle) with irregular thickness, and flattened inner surface [Also pl XXVII, No 7] Diameter 65 mm, max thickness 9 mm, minimum thickness 5 mm No 789a, K W N d2(2) Period III IV

No 5 Rusted iron ring with broad sides [Also pl XXVII, No 8] Outer diameter 31 mm, breadth of sides 18 mm No details

No 6 Similar to above but more intact [Also pl XXVII, No 9] Outer diameter 32 mm, breadth of sides 19 mm No 426 MG N D(4) Period IIB

Nails

In all, twelve fragmentary and twenty-eight intact nails were found Out of the latter, twenty-three belong to Period IIA

The intact specimens may be grouped into three main types :—(a) With a flat head and rectangular cross-section, (b) Elongated rectangular cross-section and convex head, (c) With a flattened convex head and a thin flat body.

Type	Total	Period	Max Length	Min Length	Max Thickness	Min Thickness
(a)	19	IIA 15 III IV 2 2 Unstratified	185 mm	34 mm	25 mm	13 mm
(b)	7	IIA 6 III IV 1	95 mm	65 mm	28 mm	10 mm
(c)	2	IIA 2	56 mm	56 mm	21 mm	10 mm

Out of the twelve fragmentary pieces, nine (Nos 198, 198a, 250, 501, 501a, 601, 607, 617, 617a) belong to Period IIA

One belongs to Period IIB [No 684 MG.N (4)]

One to Period IV [No 455 MG N (3)], and in the case of No 150a, no details could be had.

It seems clear from the above classification that nails were very much in use in Period II at Nasik.

The illustrated specimens are as follows [Fig 54] :

No 6 A heavily rusted long nail, straight but tapering, with a rectangular section and flat head (Type a) Length 185 mm, thickness 25 mm No 22, MG N A(5) Period IIA [Also, No 9].

No 7 A short nail with a tapering body, squarish section, and a flat circular head (Type a) Length 44 mm, thickness 15 mm No 18a, MG N D(5) Period IIA

No 8 A flat iron nail with one end thin, convex and projecting and the other broken (Type c) Length 56 mm, thickness 21 mm No 762, MG N D(5) Period IIA

Indeterminate Objects

The rest of the objects—six in number—were fragmentary and heavily encrusted beyond recognition. Only one of them (No. 631) had some definite shape but its purpose is indeterminate [Fig 53]·

No 7 A rusted, broken, long tanged iron object with a shallow trident shaped head [Also pl XXVI, No 13] Length 71 mm, breadth of the head 15 mm No 631 MG N E(5) Period IIA

XII

STONE OBJECTS

A large number of mullers and querns formed the bulk of stone objects found at Nasik The other stone objects were merely fragments, either polished or otherwise Some of the former might have been used, probably, as blade sharpeners, and the latter are of indeterminate use Hence only the mullers and querns are described in detail below.

Querns and Mullers

Twenty-four mullers [*Marathi, varavantā*] and sixteen querns [*pātā*] were found A majority among them were fragments

Mullers

Among the mullers, nearly two-thirds are made of red sandstone, the rest are of basaltic trap They fall into two main types (a) Cylindrical, (b) Oval

The former variety is represented by twenty specimens out of which five are intact These can be further sub-divided into three sub-varieties

(i) Perfectly cylindrical with a round section,
(ii) Cylindrical with slightly double concave middle portion,
(iii) Cylindrical but with the middle portion broader than the ends

Twelve belong to Period IIA, and eight to IIB

The specimens of the variety (b) are made only of trap, and their thick surface at the circumference shows traces of battering or hitting at something. Out of the four, two belong to Period IIA, and two come from the layer of Period IV of MG.N.

Saddle-querns

Along with these twenty-four mullers, sixteen saddle querns were recovered, which reveal a preference of trap to sandstone.[1] Only one intact specimen was found; the rest were fragments.

A majority of these have one end projected with a view to let any pounded material fall into a dish kept below the projection. These ends are either rectangular or rounded, the latter invariably associated at Nasik with the decorated variety. Out of the thirteen undecorated specimens, ten come from the layers (4) and (5) of Period II at MG.N., and the rest from the disturbed top layers of K.W.N. and MG.E.N. They vary in breadth from 65 mm. to 190 mm. Another feature is that these have either a flat or a concave surface, and either perfectly rectangular or a slightly thinned middle portion. Out of the four decorated specimens [Nos. 349, 474, 477 and 753], the first three came from the layers of Period II at MG.N., and the last from the disturbed top layer of MG.E.N. It is uite likely that the latter belonged to earlier layers. No. 474 has no other decoration except a number of random linear incisions. The others have Buddhist symbols.

The following are illustrated [pl XXVIII]

No 1 Complete quern and muller, both of trap, the surface of the former slightly concave and smooth, one end projecting, thinner in the middle, the muller is perfectly cylindrical with flat ends Length of the quern 420 mm , breadth 180 and 190 mm , length of the muller 230 mm , diameter 65 mm , Nos 245 and 152 respectively, MG N B(5) and (4) Periods IIA and IIB respectively

No 2 A fragment of quern bearing on its red sandstone surface a pair of Triratna symbols which contain in between them probably a Svastika with rounded arms flanked by a pair of linear designs The whole panel is enclosed by an incised line

Length 181 mm , breadth 170 mm , thickness 53 mm No 477, MG N B(5) Period IIA

No 3 Fragment of the rounded projecting end of a sandstone quern having on its smooth and polished surface a crescent shaped incised dotted portion over which is embossed the figure of the Buddhist Triratna The latter is polished and smoothed so as to stand out in relief over the rough crescent shaped portion Thickness 39 mm No 349, MG N A(5) Period IIA

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1 It may be noted here that sandstone is absent near Nasik, hence it is likely that the material was brought from outside

No 4 An oval shaped muller of trap with traces of battering on the thickness at the circumference Length 96 mm , breadth 86 mm thickness 57 mm No 223, MG N F(5) Period IIA

No 5 Possibly a fragment of a quern with one surface somewhat smooth and the other having embossed and thick arches in relief over which there is a Triratna symbol Length 104 mm , breadth 123 mm , thickness 31 mm No 753, MG N (1) Period IV

XIII

OBJECTS OF BONE, IVORY, STEATITE AND SHELL

SHELL OBJECTS

Besides various types of shells, (see Appendix III) six objects made out of shell were recovered

Of these six, four were perforated shells used, most probably, as pendents or for similar purpose The rest were big and thick shells The peculiarity of the latter variety was that one out of them had definite traces of copper rivetting at one end, while only holes were left at the other end opposite to it The first impression was that it was a spoon but rivetting on either side came in the way of this identification It may, however, be noted that rivetted shells were used as head ornaments at Mohenjodaro—a fashion which continued in early historical times and survives in some parts of India even today For ornaments like these are found in figure sculptures and paintings and are worn by Rajput and Lamāna women

From their occurrence in layer (5), the rivetted shell, big burnt shell, and perforated shells can be ascribed to Period IIA at Nasik The last variety is obtained in the later period also

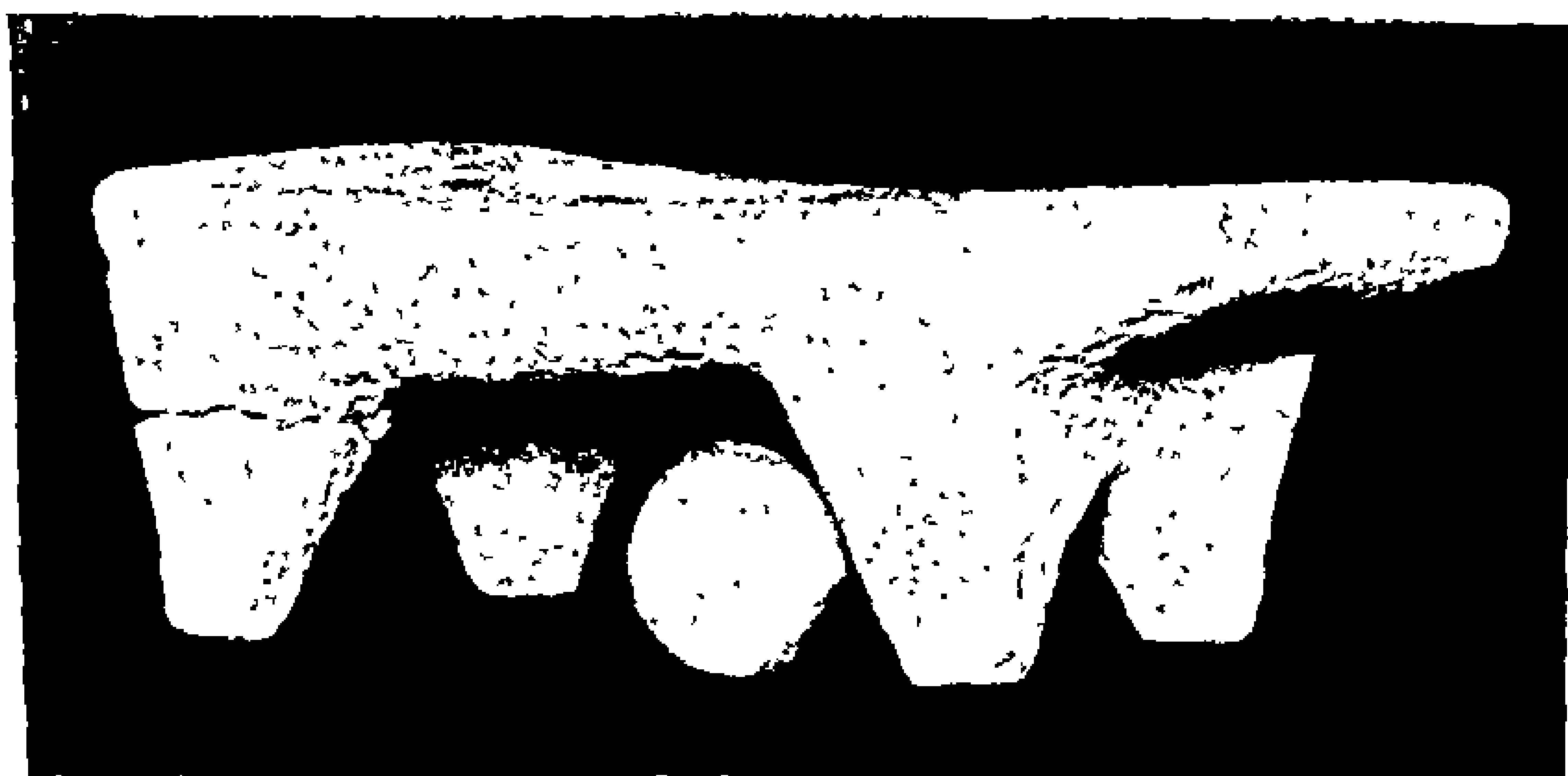
The following objects are illustrated [pl XXIX]

No 1 A broken half of an oval marine bivalve shell of ivory colour having at one side a pair of rusted copper revetments , on the opposite edge there are two perforations Breadth 83 mm No 158, MG N.A(5) Period IIA

No 2 A piece of polished shell object of milky white colour with one surface flat and very smooth No 479, MG N B(5) Period IIA

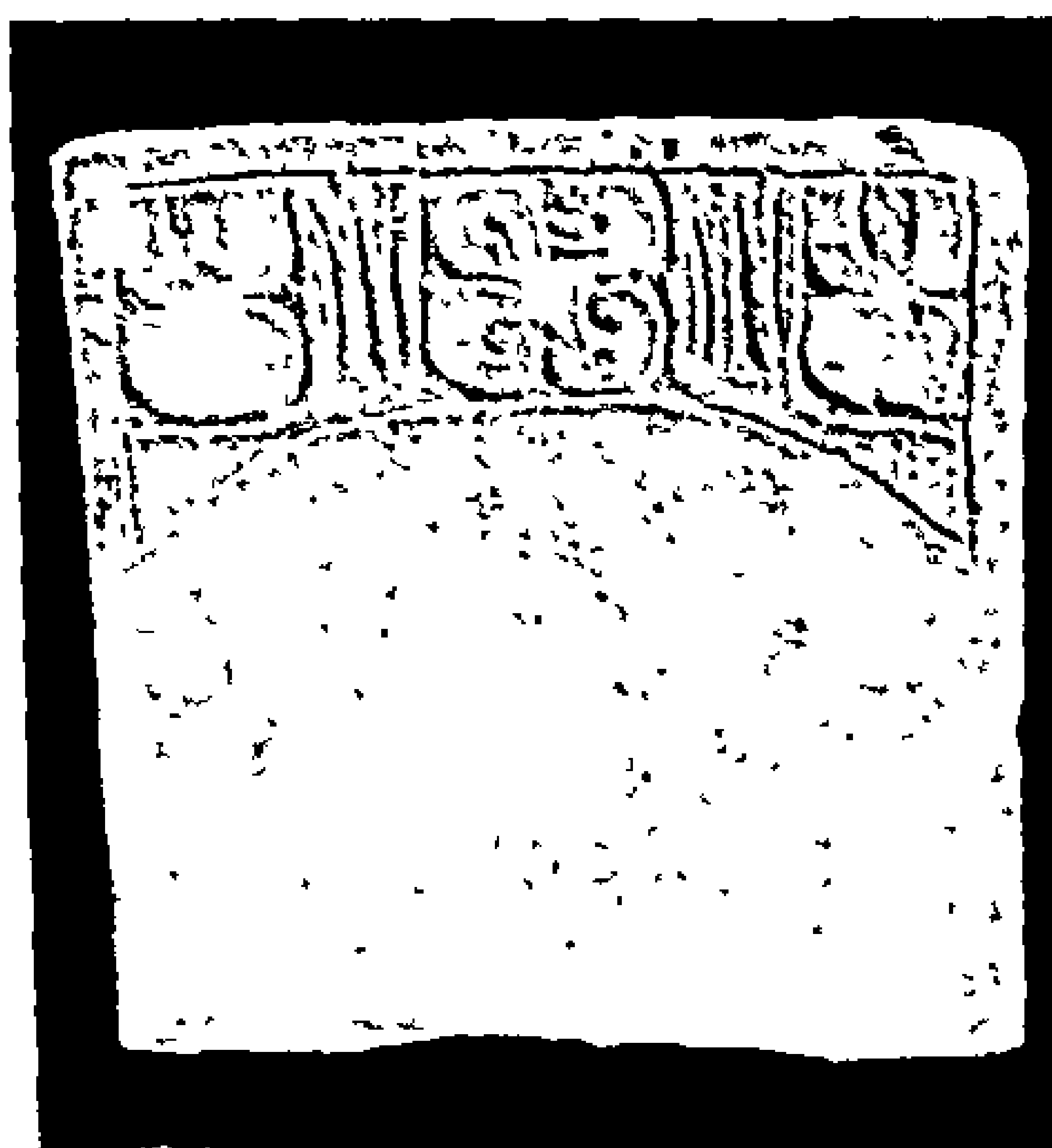
No 5 A fragment of a yellowish piece of shell with two holes indicative of rivetting, [may be a part of No 1 above] Length 78 mm , breadth 21 mm No 479a, MG N A(5) Period IIA

No 6 A fragmentary shell piece with thin rectangular cross section and having seven shallow circular incised holes on one surface , may be a fragment of a handle of something Length 23 mm breadth 11 mm , thickness 4 mm , No 301, MG N G (5) Period IIA

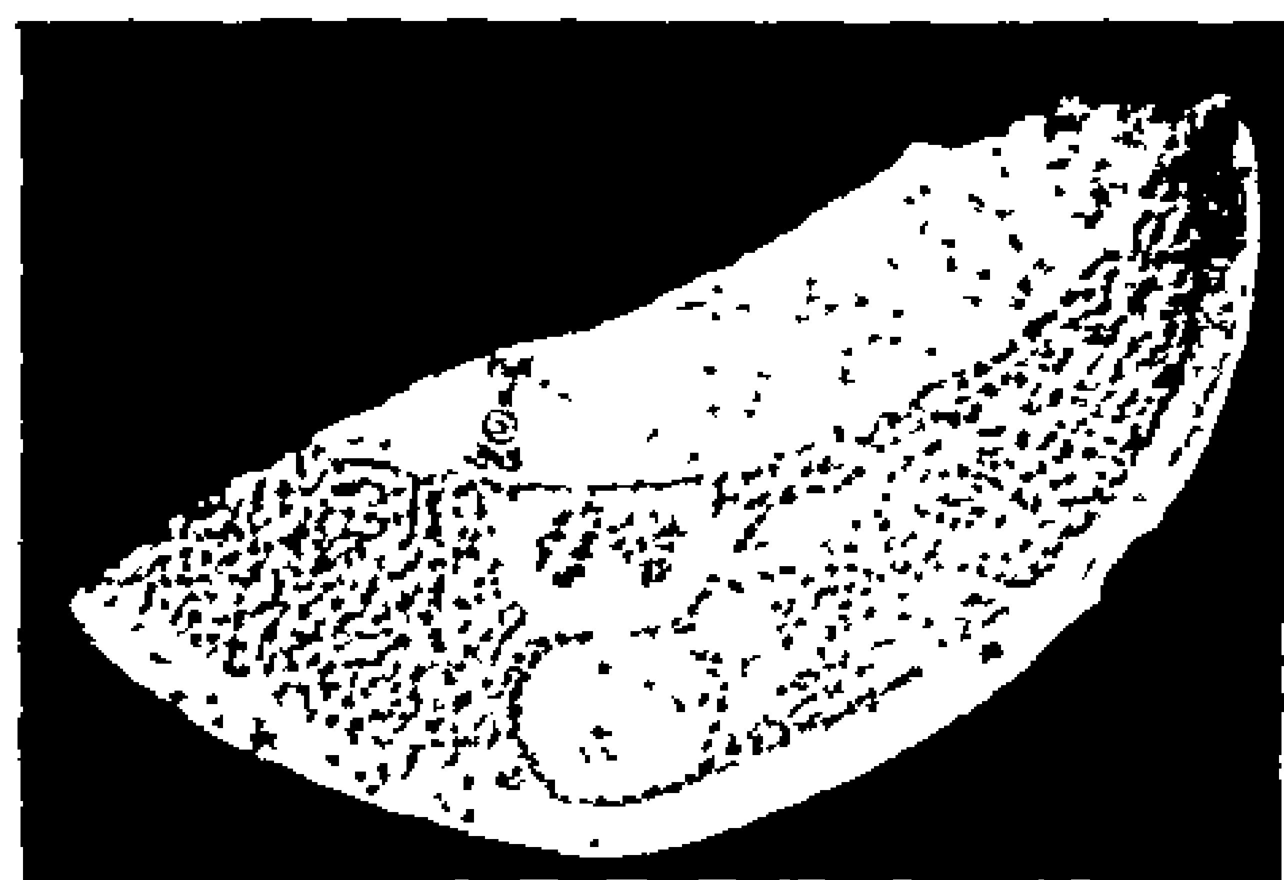


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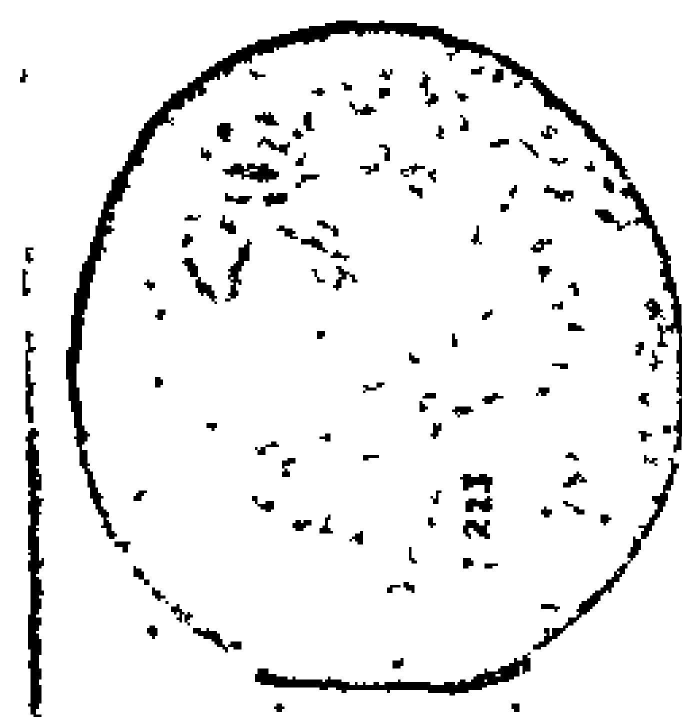
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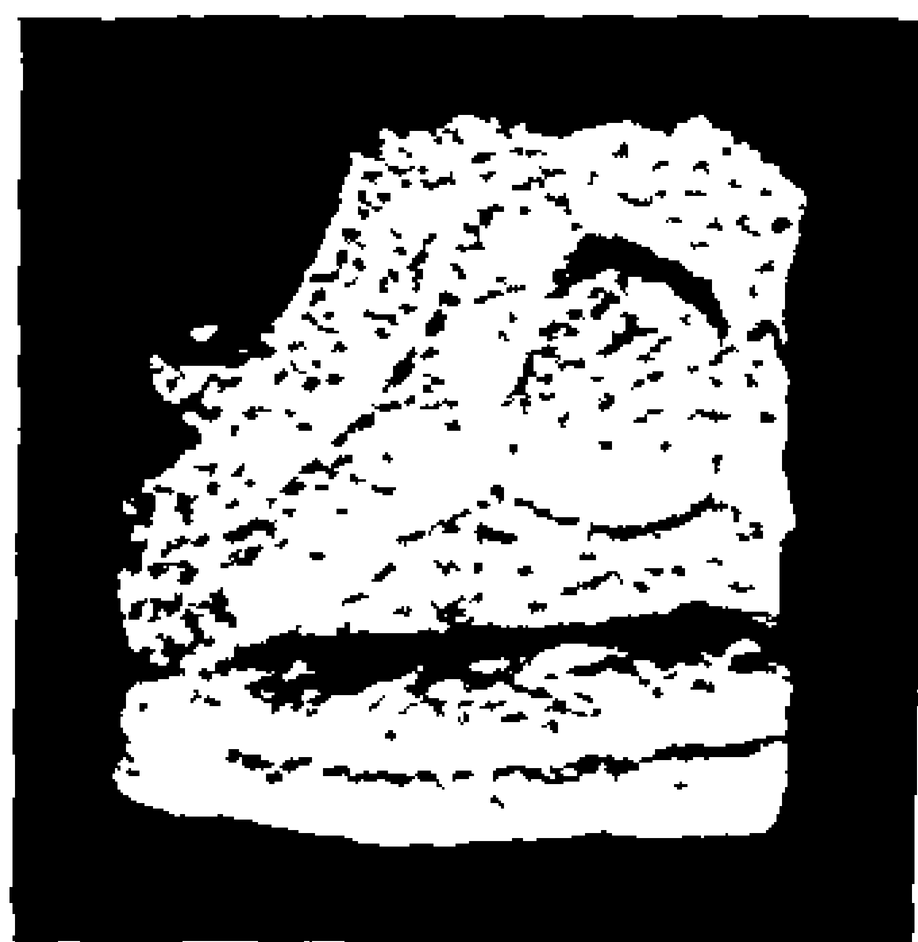
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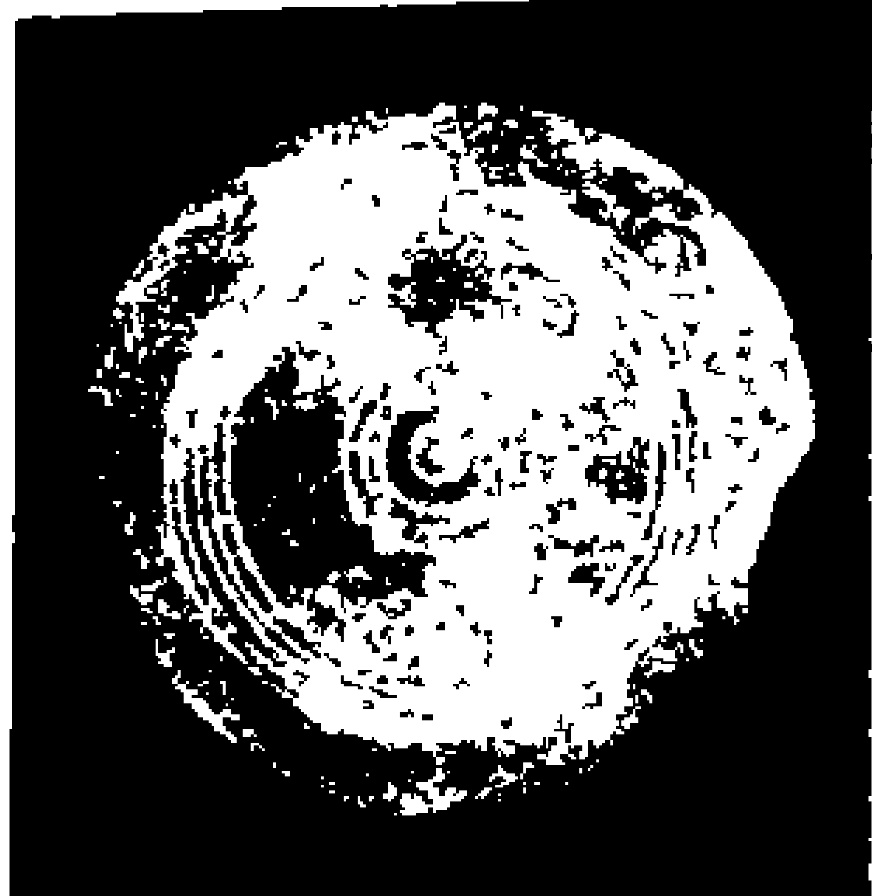
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5

Stone objects Saddle Quern (Pata) (1–3) Stone ball (4). Carved object (5)

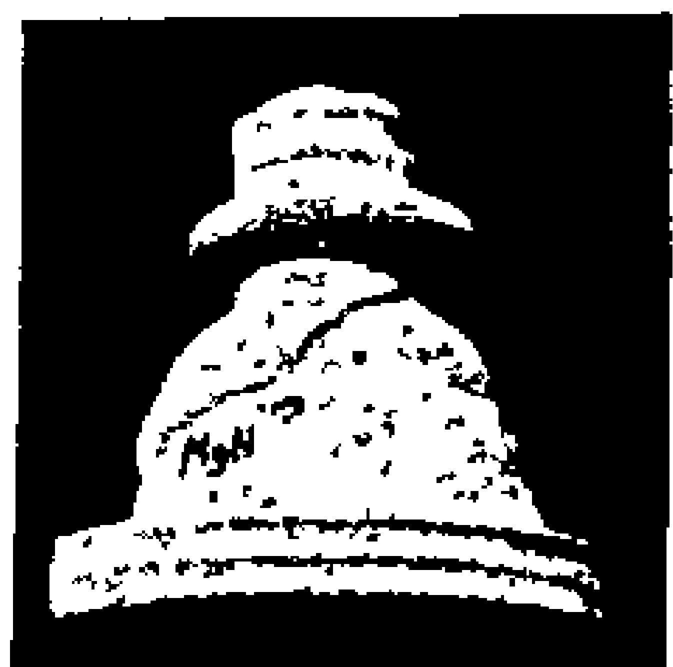
(*See p. 117*)


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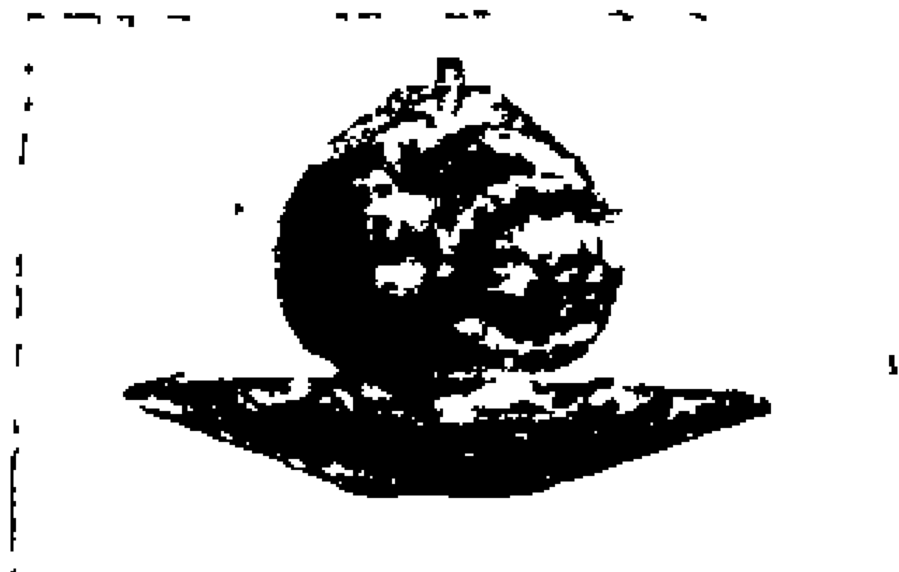


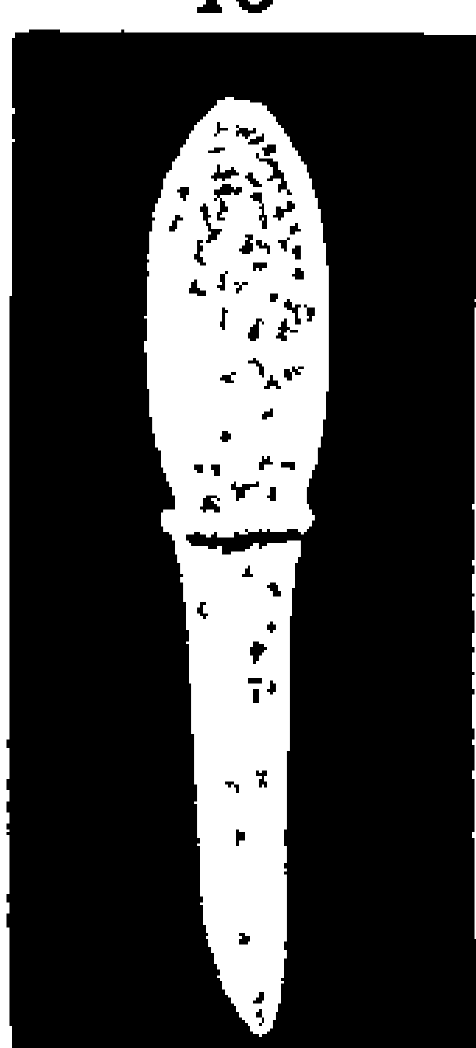

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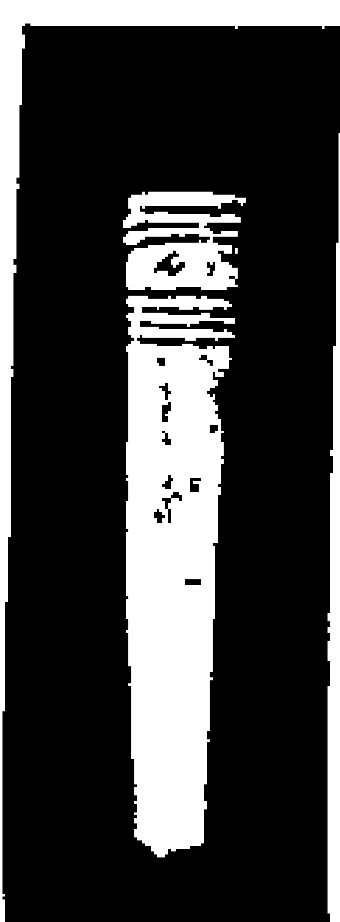

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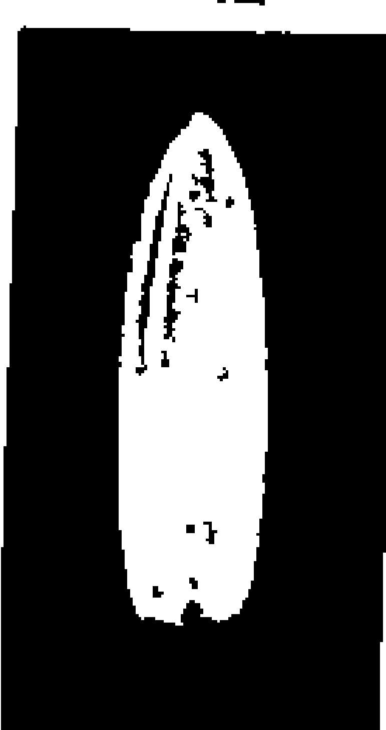

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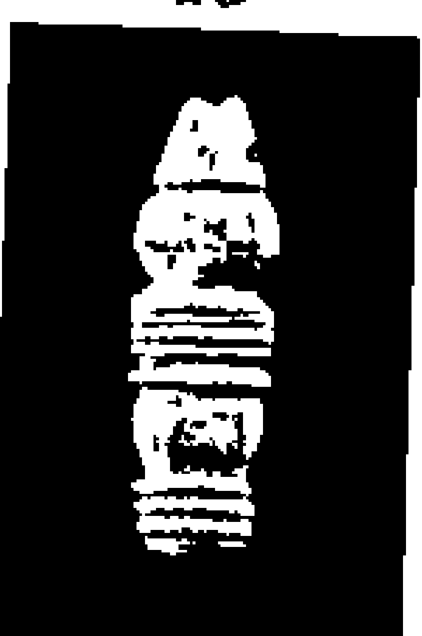

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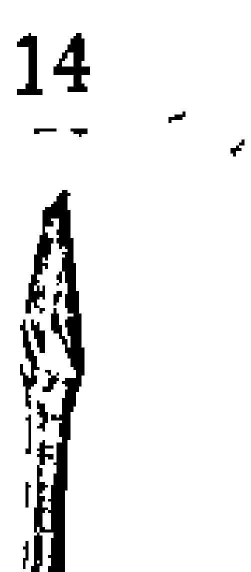

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12


13


14


15


16

17

Shell (1, 2, 5–6), Steatite (3, 4, 7, 8) and Bone objects (9–17). Period II
(See pp. 118, 119, 120, 121)

OBJECTS OF BONE, IVORY, STEATITE AND SHELL

Bone Objects

Only a few bone objects were found and most of them were antimony rods. The others being not important are not illustrated.

Antimony Rods or Kohl Sticks

In all nine Kohl sticks—some complete and some fragmentary—were found. They can be grouped in three types as follows :—

(a) Long tapering sticks with the broader end decorated,

(b) Short sticks with one end tapering and pointed, and the other somewhat elongated bi-convex,

(c) Thin sticks with conical ends.

Kohl sticks were in use in Egypt from early times and have been discovered at Mohenjodaro and Taxila [c.4-3rd century B.C.][1] as also in many Satavahana sites in the Deccan, like Karhad and Kolhapur. At Nasik, most of these belong to Period IV as details in the case of some are lacking. It is quite likely that some of these Kohl sticks belong to the lower layers, i e. Period II, as earth-grabbers have very much disturbed the layers of Period IV.

The illustrated specimens are as follows [Fig 55] .—

No 1 Black polished body, circular cross section, and having a design of diamonds in relief enclosed by grooves at the broader flat end , the other end broken [Type a] [Also pl XXIX, No 12], Length 53 mm , thickness 12 mm No Z, MG N Details not available

No 2 Long, polished ashy-yellow body with the tapering end broken, and the other broader end having four grooves round the cylindrical body [Type a] [Also pl XXIX, No 17] Length 91 mm , thickness 8 mm. No 127, MG N G(2)

No 3 Similar to above but having a different decoration of grooves and knobs [Type a] [Also pl XXIX, No 9] Length 85 mm , thickness 10 mm No 127A, MG N G(2)

No 4 Similar to above but having a flat broader end with a pair of three incised grooves enclosing a criss cross design, and an oval cross section [Type a] [Also pl XXIX, No 10] Length 75 mm , thickness 10 mm No 112, K W X C5 (2)

No 5 Probably the ornamented head of a bone Kohl stick with decorations somewhat similar to No 3 but with a truncated conical end [Type a] [Also pl XXIX, No 13] Length 36 mm , thickness 12 mm No 127B MG.N G(2)

No 6 Kohl stick with a short body having one end tapering and pointed and the other having an elongated double convex head , at the junction of the body and the head there is a ring in relief [Type b] [Also pl XXIX, No 16] Length 70 mm , thickness 14 mm No X, MG N Details not available

1. Marshall, *Taxila*, Vol II, pp 585 6.

Two fragments of type (b) were recovered [Nos 122 and 134], the former [pl XXIX, No 15] being the portion below the head but longer and tapering, with a length of 36 mm was recovered from MG N F(2), and the latter [pl XXIX, No 11] was only the elongated head with high polish, and 41 mm in length, recovered from MG N B(2)

No 7 An almost conical piece of a bone Kolh stick, grey in colour, with oblique and parallel incisions round the broadest portion of the head [Type c] [Also pl XXIX, No 14] Length 32 mm, thickness 6 mm No Y Details not available

OTHER OBJECTS

Only four other objects of bone were recovered—all from layer (5) i e Period IIA They are not very important and hence only summarised below.

Out of the four, two [Nos 330 and 620] are bored tube-like pieces of bone, 17 and 38 mm long respectively and of indeterminate use

Of the rest, No 216 is a roughly rectangular piece of bone with one end rounded and the other broken, having parallel lengthwise grooves on one surface, 58 mm in length, 6 mm in thickness, and 15 mm in breadth use, indeterminate

No 1576 is a hexagonal piece of bone broken at both ends, with the body tapering at one end, well polished, length 46 mm, use not known

OBJECTS OF IVORY

Only a single object of ivory was found, and that is a dice It is a long cubical piece having sets of five concentric ring-incisions—one set on one surface, two on the opposite, three on the third and four sets on the fourth surface[1]

Fig 55 No 12 Length 57 mm Breadth 12 mm No 328, MG N D (2) Period IV

STEATITE OBJECTS

Only a small number of steatite objects was found Out of six, two are fragmentary The rest, however, are well-worked objects, with definite shapes like that of a petal or a bell or a lid Three of these belong to Period IIA [Fig 55]

No 8 Small lid like object with a thick arecanut like knob on the flattened top of the latter is inserted an iron pin The underside of the lid is convex [Also pl XXIX, No 7] Diameter of the base 46 mm, that of the knob 27 mm No 832, MG N D(5) Period IIA

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1 Cf specimens from Taxila [of bone] *Ancient India* No 4 p 81 and pl XXI, No 20, Rairh [of ivory, bone and stone] PURI, *Exc at Rairh* pl XXII, 14

No 9 A lotus petal like object of greenish steatite, smooth and hollowed on the underside, the upperside is convex and is completely worked over bearing tiny, vertical, horizontal and oblique scratches There is a small hole in the centre, probably the petal is a part of a complete lotus [Also pl XXIX, No 3] Length 50 mm, breadth 24 mm No 261 MG N F(5) Period IIA

No 10 A steatite lid greyish black in colour, very smooth, with half the rim broken, the outer surface has sets of five and four concentric rings just round the centre of the top [Also pl XXIX, No 4] Diameter 61 mm, thickness 3 mm MG N D(5) Period IIA

No 11 A bell shaped hollow object of greyish blue colour, half broken having a hole right through the top, the outer surface has very fine grooves both at the top as well as at the base of indeterminate use [Also pl XXIX, No 8] Height 44 mm diameter of the base 51 mm, thickness 3 mm MG N D(1) Period III IV

XIV

BONE POINTS FROM NASIK[1]

Three different types of collections of pointed objects of bone, here termed "bone points" for the sake of convenience and in the absence of a more suitable term to cover all forms, were made while conducting excavations at Nasik The first is a stratified collection from all the localities The second is a surface collection The third is a sample collection out of a huge number *in situ*—perhaps a million—lying buried over the layer of natural earth and covered by a thin layer of later deposits From the associated objects and the nature of the earth this layer seems to belong to Andhra (Satavahana) period Before indicating their age typologically as well as their types and probable uses the stratified material is first studied and then other collections

A Stratified
B Surface
C Andhra Workshop site

A Stratified Bone Points

An interesting assemblage of bone points and other bone objects came from the stratified layers Their vertical distribution is shown in the following chart (No 1) No bone object of any description was recovered from layer below the fifth This layer (MG N), however, was the richest not only in number of specimens (nine) but in their variety and workmanship One will feel tempted to equate the two ball-pointed modelling tools

1 This section is prepared under my guidance by Shri K D Banerji, a student working in the Department [H D S]

with those found from Sirkap layer II or III, or from Bhir mound.[1] But our specimens are much superior in finish and polish. One (No. 246) is painted black and decorated by incised lines. Another point of superiority is in the double ball points, while the Taxila parallels have only one. The ornamented dentilium (No. 5724) was probably used as a bead. No. X was probably a stilus. A peculiarity of the two modelling tools and the stilus was that they show deliberate and rough bevelling opposite the supposed working end. Possibly the bevelling was for attaching them to a handle. Even if it were so they were not originally meant to be so, for their high polish, good finish and superior workmanship are in contrast with the crude, rough bevelling. Their very small length (for a modelling tool or stilus) and rough bevelling suggest that these were not originally meant to be attached to a handle and done so only after the other ends broke. The well polished, partially hollowed specimen (No. 620), will then be the handle for a metal stilus, i.e. with a metal point. No bone point, either of double ended type or of tanged type[2] was found. The fourth layer did not yield any bone tool.

The following specimens are illustrated [Fig. 56]:—

No x — A roughly worked bone point, probably a modelling tool, retouched at one of the tips, while other tip is broken, cross section oval, dark brown 83 mm, 9 mm MG N D(5)

No 187 — A double, ball-pointed, modelling tool with the other end broken The ball point is but one projection, supporting another minute one, cross-section oval with flattened sides, honey-brown Length 90 mm, breadth 11 mm, thickness 7 mm MG N G(5) [Fig 56, h]

No 246 — A double ball pointed modelling tool, with one ball broken, highly polished and painted black having two incised decorations round the body The other end shows crude bevelling, cross section circular. 47 5 mm, 7 mm MG N. G(5) [Fig 56, f]

No 446 — A double ended bone point, broken at both ends, roughly worked, 96 mm, 9 mm, 7 mm, MG N (3)

No 620 — Probably the handle of a stilus, broken at one end, having circular longitudinal groove at the other, truncated end for the insertion of a part of a metal rod, Dark brown 38 mm, 9 mm MG.N A(5) [Fig 56, d]

No 895 — A tanged bone point, unpolished, roughly biconical in outline with ovaloid cross section, dark brown with ashy white patches Length 69 mm, length of the tang 16 mm, breadth of body 11 mm, breadth of the tang 5 mm. MG E N Ie(3) [Fig. 56, c]

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1. J. Marshall, *Taxila*, Vol 2, 660 1, for fig ref Vol 3, 105

2. The stylistic interpretation is purely tentative as the later layers of MG N are known to be disturbed. (H D S)

No 5724 An ornamented partially hollow and partially perforated (in continuation of the hollow part) piece of probably the canine of a carnivora, roughly circular in cross section, slightly bent with diameter increasing from one end to the other, the narrowest end is transversely cut and shows the longitudinal perforation at the centre while the other end is broken and hollow The piece is ornamented by eight longitudinal ridges running end to end, the gaps between the ridges being filled with incised parallel lines three in a gap Length 42 mm, diameter 5 7 mm MG N E(5) [Fig 56, e][1]

B Surface Bone Points

Altogether thirty four bone points were found. These belong to both the varieties, i e double-ended and tanged The double-ended varieties are in majority with twenty four (70 61%) specimens

These points vary but little from those described above, while the tanged specimens are the exact duplicates of some of the specimens from the factory site, the double-ended specimens from the two sites differ fundamentally The main difference is in size, shape and the texture The specimens from the surface, excepting the three tanged specimens, do not give any metallic sound, whereas every specimen from the factory site gives such a sound. In colour also the variation is there But for the three above mentioned specimens, all are of light brown colour or its variation, while those from the factory sites are ashy or even milky-white in colour The measuremental difference between the three groups are shown below:—

Site	Type A (double-ended)		Type B (tanged)			
			Length variation		Breadth variation	
	Length variation	Breadth variation	Body	Tang	Body	Tang
Stratified layers	39—86 mm mainly from 60—64	7—12 mm majority 8 mm	53 mm	16 mm	11 mm	5 mm
Surface	54—99 mm	7—12 mm mainly 10 mm	48—63 mm	—	—10 mm	—
Andhra Factory	35—100 mm	4—10 mm	24—58 mm.	13—25 excepting one 3 one 34 one	5—11 mm	4—7 mm mainly 5—6

Since many of these are similar to those from the Andhra workshop only one is illustrated the rest are merely described Type, M 48 D, [Fig 56 i]

No 48A A double ended bone point, slightly polished elongated biconical in shape with a circular cross section, light brown 64 mm, 10 mm

1 It is very probably a Dentalium Shell (H D S)

No 48A2 A double ended bone point, with little or no polish, similar to No 48A, yellowish brown 72 mm, 11 mm

No 48A3 A double ended point, both ends broken, rougher in make, otherwise similar to No 48A 64 mm, 9 mm

No 48A5 A double ended bone point, with rougher flakings, yellowish brown, otherwise similar to No 48A 64 mm, 8 mm

No 48A6 A double ended bone point, broken at half, medium brown in colour with occasional patches, otherwise similar to No 48A 54 mm, 10 mm

No 48B1 A double ended bone point, partially polished, elongated biconical in shape with almost circular cross section, light yellowish brown with dark brown patches 95 mm, 10 mm, 8 mm

No 48B2 A double ended point, narrower and more elongated than and otherwise similar to No 48B1 95 mm, 10 mm, 7 mm

No 48B8 A double ended point, much worn out, otherwise similar to No 48B 74 mm 9 mm, 7 mm

No 48C1 A double ended point, unpolished, ends broken, roughly biconical in outline with roughly triangular cross section, colour light brown 68 mm, 7 mm

No 48D1 A double ended point, worn out, broken at one end, elongated biconical in outline with oblong cross section, dark brown with ash white patches 97 mm, 11 mm, 6 mm, comparatively fresh as spongy part of the bone is still visible [Fig 56, i]

No 48D A double ended point, roughly worked, elongated biconical in outline, cross section rectangular with rounded sides, colour dark brown with ash brown patches 85 mm, 10 mm, 5 mm

No 48E1 A double ended point, elongated biconical in outline with plano convex cross-section, yellowish brown with dark brown patches, a slanting slit on one side of the body 78 mm, 10 mm, 6 mm

No 48F1 A double ended point roughly flaked, elongated diamond shaped, with oval cross section yellowish brown 61 mm, 11 mm, 7 mm

No 48X3 A tanged bone point roughly made almost unpolished, elliptical cross section, colour light brown Body 55 mm 10 mm, 7 mm, tang 9 mm, 5 mm, 4 mm

No 48X6 A tanged bone point, tang broken at the root, roughly triangular in cross section, comparatively brown 67 mm, 9 mm, 9 mm

No 48Y2 A tanged probably *wooden* point, broken at the base near the tang, broad oval cross section Attempt to make a subsequent tang visible 50 mm, 8 mm, 7 mm

C Bone Points from the Andhra Workshop

This sample collection is insignificant in number when compared to the vast number of specimens left at the place (See pl III c) The sample, however, contained 17868 broken pieces and 1499 workable specimens. The latter was worked upon thoroughly and classified. All these specimens, including the broken ones show signs of flaking and some of polishing. A high metallic sound is given by all these specimens. Contrary to the expectation, the collection does not show specimens in different stages of

production, in a sufficient degree. At least 84 finished specimens and 131 broken pieces show clear signs of burning All the specimens vary extremely in shapes and sizes. In fact the variation is so much that it is difficult to bring them together in any number of groups or sub-groups

Allowing, therefore, a considerable variation among specimens in a particular group the following classification can be made Primarily they are divided into two broad types.

(A) Double-ended points

(B) Tanged points.

Type A Double-ended Points

The common character of this group is that all specimens have both ends pointed In most of the cases the anterior and posterior end cannot be differentiated In hundred and four specimens the difference can be marked, one end being more tapering than the other The broadest part of the specimens is at or near the centre But specimens having flat cross-section generally are uniformly thick, tapering suddenly at either end (the breadth, of course, decreases from centre to the point)

The shapes, sizes, and finish of the specimens differ so much that it is only possible to sub-classify them broadly The classification, however, is based on shape only, for the variation of size is too great to be accounted Since the classification is irrespective of the size of the specimens, slight change of shape due to the disconformity in lengths and breadths is visible in one group In this connection it may be stated that specimens with greatest length in a group hardly, if ever, correspond to the greatest breadth The variation of the measurements will be shown in a tabular form along with other information in Chart No 2

Sub type I Nos 17, 18	Straight, with tapering pointed ends polished or unpolished, section at the centre varying from biconvex to circular
Sub type II Nos 19, 20, 25	Bow shaped, bent body, tapering pointed ends partly polished or unpolished, section in the centre flat to round This group contains some of the best finished specimens
Sub type III Nos 21, 22	Body bent back as in S twist, ends pointed partly polished or un polished, section at the centre biconvex to circular
Sub type IV Nos 23, 24	Straight or almost straight body, pointed at either end but bent on one, partly polished or unpolished, section at the centre biconvex to circular

Sub type V	Almost straight, i e slightly bent specimen corresponding to a much lesser degree to the sub types II, III and IV, partly polished and unpolished, section in the centre biconvex to circular
Sub type VI Nos 21, 27, 28	Miscellaneous group of peculiar shapes

Type B Tanged Points

Points of this group are all tanged Both the body and the tang are pointed though the tang mostly ends in a sharper point In eleven cases secondary facets to refashion the tang are visible

In shape and finish this group is superior to the double-ended points The variation of measurements also are not so much as in Type A (double-ended) specimens So these specimens can be grouped measurementally to a certain extent Unpolished specimens are comparatively much rarer, though partly polished specimens are abundant Most of the specimens, however, are polished all over, even though slightly

For the convenience of description a tanged specimen is divided into the two component (inseparable) parts—the body and the tang The former is necessarily broader than the tang and the root of the tang and the base of the body is completely separated by a surface (in most cases flat) The broadest part of the body is not necessarily in the centre but may also be at the base

The tanged specimens are further classified as follows This depends mainly on shape and not on size, though measuremental groupings will be shown in tabular form in Chart No 3

Sub type I Nos 1, 2 3 4	Straight conical or one end truncated biconical body with a comparatively thinner conical tang, section varies from broad oval to circular
Sub type II Nos 6 7	Body and tang curved in one way, both tapering to a point, section varying from biconvex to circular
Sub type III Nos 8 9	Straight body tapering to a point with a bent tang, section from elliptical to circular
Sub type IV Nos 10 11	Slightly bent body tapering to a point with bent conical tang section from biconvex to circular
Sub type IV Nos 14 15 5	Body and tang bent in opposite directions as in S twist, section oval to circular
Sub type VII Nos 29 30 31 32	Miscellaneous types of peculiar shapes
Sub type VIII	A group intermediate in character Chart 3 shows the relation between groups

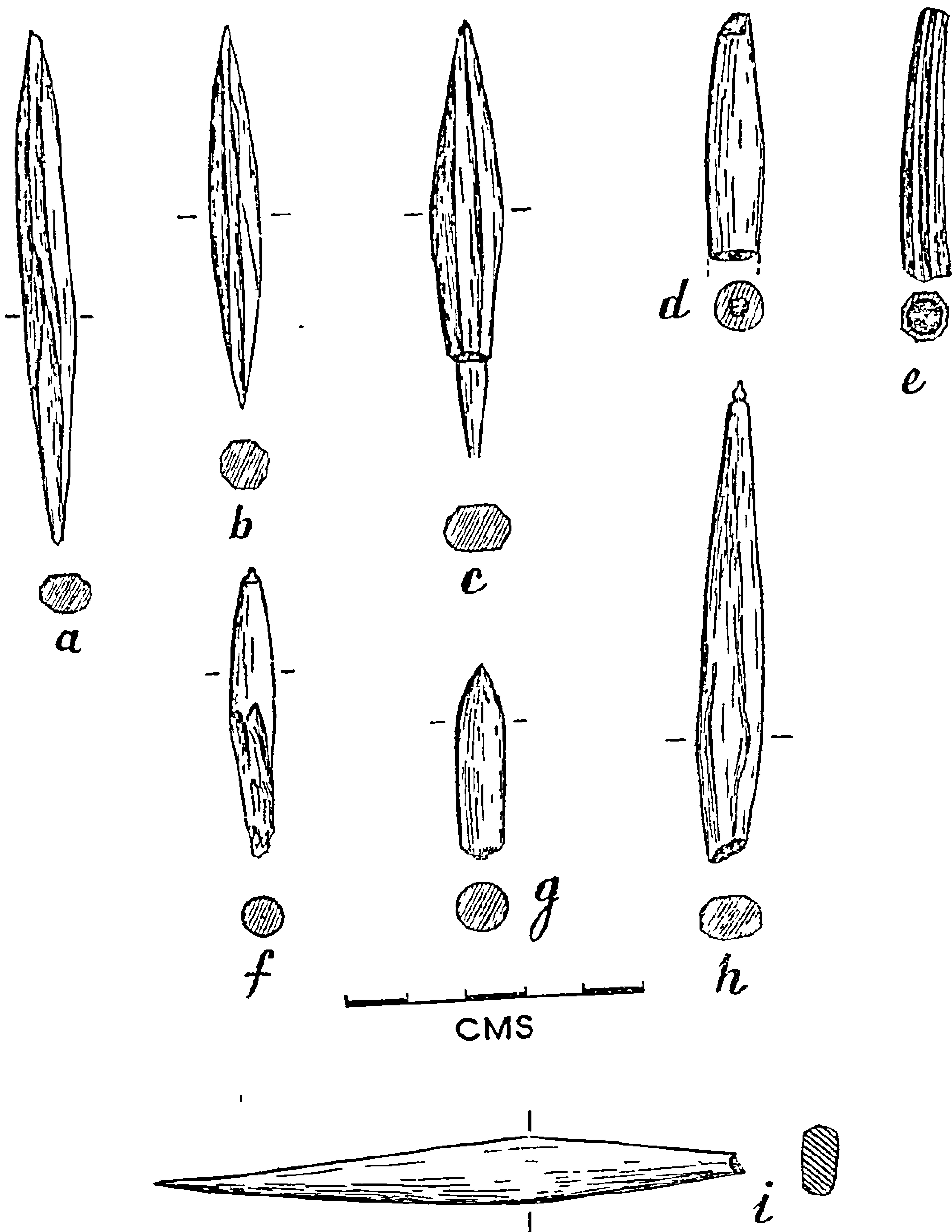


Fig 56 Bone Points Surface and Excavated, excepting (e) Dentalium Shell
(See p 122)

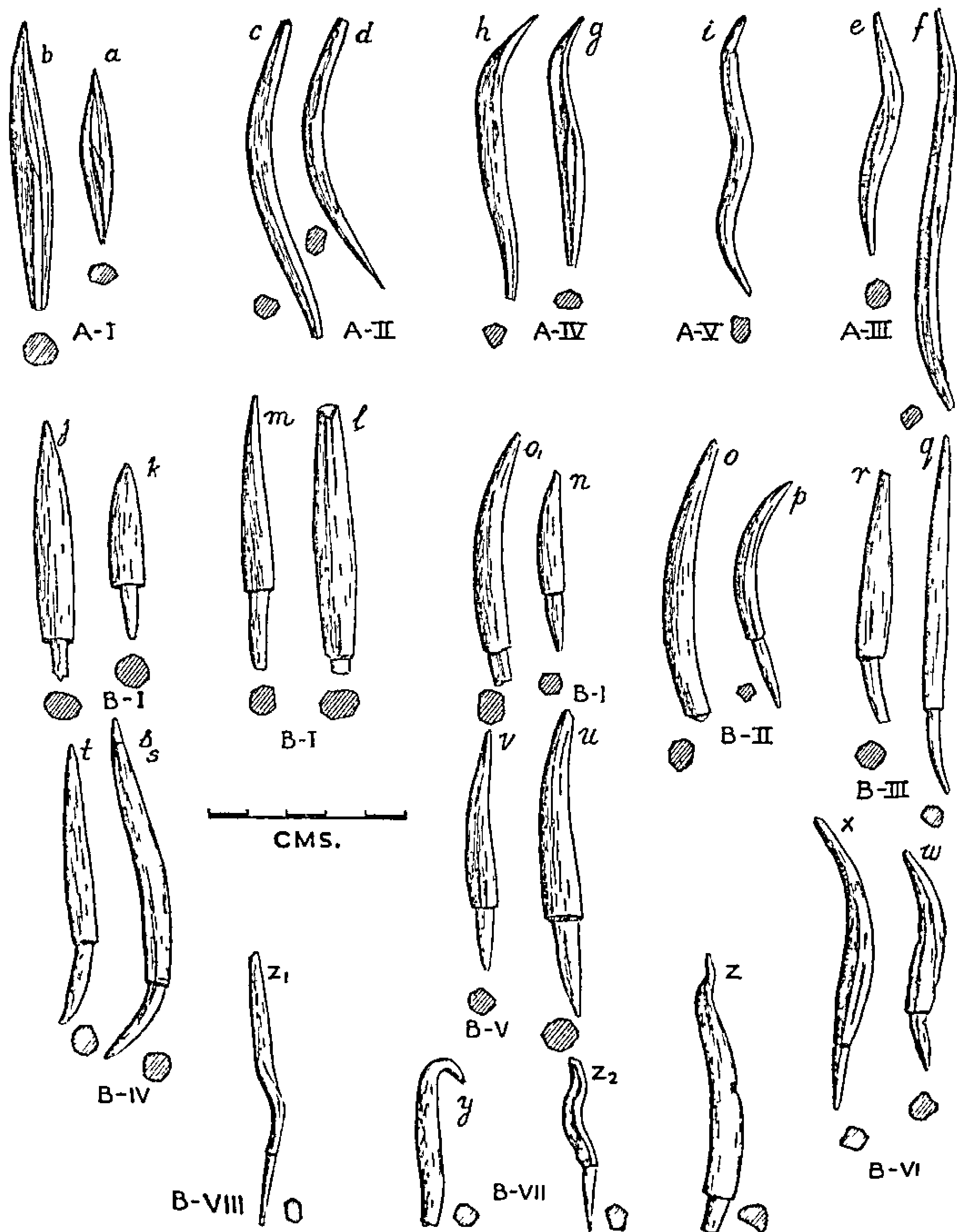


Fig 57 Bone Points from Andhra Workshop

(See pp. 127 125)

BONE POINTS

[The following specimens are illustrated]

Double ended points [Fig 57]

No 17 A double ended bone point, polished, biconical in outline, section roughly oval, colour light brown 42 mm , 7 mm [Fig 57, b]

No 18 A double ended bone point, partly polished, broken at one end, roughly biconical in shape, section triangular with rounded sides 69 mm , 7 5 mm [Fig 57, a]

No 19 A double ended bone point, curved like a bow, one tip unturned while the other broken, section roughly circular, colour yellowish white with brown patches 78 mm , 6 mm [Fig 57, c]

No 20 A double ended point, polished, curved body, one tip broken, section flattened ovoid, colour ash white with brown patches 62 mm , 6 mm [Fig 57, d]

No 21 A double ended point, partly polished, bent in the form of S, section circular, colour ashwhite with brown patches 56 mm , 6 mm [Fig 57, e]

No 22 A double ended point, almost similar to No 21 but more elongated body with broad oval section 95 mm , 5 mm [Fig 57, f]

No 23 A double ended bone point, polished, body straight with one end bent, section ovoid, colour ash white, 58 mm , 4 5 mm [Fig 57, g]

No 24 A double ended point, almost similar to No 23, bent point more projecting section roughly triangular 68 mm , 6 mm [Fig 57, h]

No 25 A double ended point, worn out, points broken, body resembles the double bent shape of a classical bow, section dumbbell shaped, colour ash brown 68 5 mm , 6 mm [Fig 57, i]

Tanged points

No 1 A tanged bone point, polished, tip of the tang broken cylindrical body with conical tip section circular throughout colour ash white with brown patches (Body) 31 mm , 8 mm (tang) 9 mm , 4 mm

No 2 A tanged bone point, polished, tip of the tang broken body elongated conical, tang elongated conical, section of the body oval and of the tang roughly circular, colour light yellowish surface at the root of the tang more or less flat but un evenly made (Body) 56 mm 10 mm , (tang) 8 5 mm 4 mm [Fig 57 j]

No 3 A tanged bone point, slightly polished most of the tang and the tip of the body broken roughly elongated biconical in shape, section of the body and the tang oval, colour ash white (Body) 64 mm , 10 mm , (tang) 4 mm , 4 mm [Fig 57 m]

No 4 A tanged bone point, roughly polished, tip of the tang broken slightly bent body, elongated conical in shape, section of the body varies from circular at the base, triangular at the middle to elliptical at the point, colour ash white (Body) 48 mm , 8 mm , (tang) 21 mm , 5 mm [Fig 57, l]

No 5 A tanged bone point, partially polished, slightly bent body plano convex in outline, conical tang, section varying from circular at the base to oval at the centre and elliptical at the tip colour ash white with brown patches (Body) 31 mm , 6 mm , (tang) 14 mm 4 mm [Fig 57 n]

No 6 A tanged bone point, roughly polished tang completely broken, body slightly curved section roughly circular, colour ash white (Body) 70 mm , 8 mm [Fig 57, o]

No 7 A tanged bone point, unpolished, curved body and tang, both circular, colour ash white (Body) 6 mm , 3 mm [Fig 57, p]

No 8 A tanged bone point, polished, body elongated cylindrical with conical tip, tang slightly bent, section of the body and the tang roughly circular, colour ash white with brown patches (Body) 68 mm, 6 mm, (tang) 23 mm, 3 5 mm [Fig 57, q]

No 9 A tanged bone point, slightly polished, tip of the body and that of tang broken, body roughly elongated biconical in shape with one end truncated, tang is curved, section of the body ovaloid and of the tang roughly circular, colour brownish white (Body) 48 mm, 6 mm; (tang) 11 mm., 4 mm [Fig 57, r]

No 10 A tanged bone point, polished, body slightly bent with roughly triangular cross section, with rounded sides while the tang is curved with circular section, colour ash white with brown patches (Body) 69 mm, 6 5 mm Max breadth (tang) 4 mm [Fig 57, s]

No 11 A tanged bone point, partially polished, body slightly bent with oval section, tang, bent from the root, with circular section, colour yellowish brown (Body) 53 mm, 7 mm, Max breadth (tang) 4 mm [Fig 57, t]

No 12 A tanged bone point, polished, body slightly bent with oval section, tang almost straight with roughly circular section, colour ash white with brown patches (Body) 66 mm, 11 mm, (tang) 22 mm, 5 mm, [Fig 57, u]

No 13 A tanged bone point, section of the tang and body circular, otherwise similar to No 12 (Body) 46 mm, 8 mm (tang) 16 mm, 5 mm [Fig 57, v]

No 14 A tanged bone point, unpolished, broken at the tips of body and tang, elongated S shaped body, section roughly circular, colour light yellowish brown with dark brown patches (Body) 42 mm, 6 mm, (tang) 16 mm, 4 mm [Fig 57 w]

No 15 A tanged bone point, almost similar to No 14, (Body) 59 mm 6 mm (tang) 16 mm, 3 mm [Fig 57, x]

No 16 A tanged bone point, polished, tang broken at half, body bent, tang straight section of tang and body plano convex, colour ash white (Body) 55 mm, 9 mm, (tang) 7 mm, 5 mm [Fig 57, o_1]

No 29 A double ended (perhaps also tanged) bone point, one end hook shaped and the other broken, section roughly circular, colour ash brown, 45 mm, 6 mm [Fig 57, y]

No 30 A tanged (perhaps also double ended) bone point, polished, body peculiarly twisted, tang slightly bent, section roughly triangular with rounded sides 62 mm, 8 mm, (tang) 4 mm

No 31 A tanged (perhaps also double ended) bone point, polished, body flattened and curved tang has conical outline, section oblong, the groove round the body not complete (Body) 54 mm, 6 mm, tang 19 mm, 3 mm [Fig 57, z_1]

No 32 A bone point, intermediate between double ended and tanged, the groove round the body not complete, section oval, body twisted 45 mm, 5 mm [Fig 57, z_2]

Construction of the Points

Though there are a large number of specimens, we have comparatively a few showing different stages of production However, some idea can be had of a few stages of production These are pointed out below .—

Type A Double ended points

Stage I A piece of long, narrow bone is taken It is then worked by a chisel to bring the whole piece to somewhat a cylindrical shape

Stage II. The piece is then worked from the central region to give the whole piece a biconical appearance.

Stage III. The piece is then polished to rub off chisel marks This completes the construction of Type A specimens

Type B *Tanged points*

Stage I The specimens necessarily undergo the first stage as in the case of Type A specimens Some pieces even undergo the second stage

Stage II Then on one side of the piece a groove is made round the body and then chiselling the whole end beyond the groove, that part of the body is made thinner and conically elongated

Stage III After getting the tang conically elongated the body is made

Stage IV The piece is then polished and the specimen is completed

As said before, the construction may undergo the second stage of construction of type A specimens. Here the tang is made out from one end by chiselling and most probably the operation is not preceded by making of a groove. The resultant specimens will have a conical tang and a biconical body truncated at the base

Before concluding the discussion on the method of construction a few words on the tang are necessary. The tang has no less importance and gets no less preference than the body during construction. In fact it will be more correct to say that the tang gets primary attention of the workmen. In no less than seven cases there is clear evidence that the tang was made first and then the body The importance of tang during construction may be due to the fact that

1 What we now call 'tang' may be really the point The implement will then be some other tool, viz awl

2 The worker being cautious makes the tang first for the delicate structure of the tang may be broken at the stage of construction and under those circumstances the labour of working on the body will go in vain

Some of the curved specimens look like intentionally made, while some others, especially those of the miscellaneous groups (Nos 26-32) do not seem to be purposely made

The length of the specimens has nothing to do, specially, with the use of the implement. The points in at least thirty cases seem to have been remodelled after polishing. If the body was used as handle of the implement then these secondary retouches would not have been necessary. The length of the tang also does not appear to be a primary object and

had perhaps nothing to do with the use of the specimens For, at least in seventy specimens, the tang was refashioned even at the cost of its length

Some of the points might have been made of bovine bones, for a bovine left premolar was found from the hoard Some of the specimens were sent to Professor F E ZEUNER for examination Though he has not made a detailed examination, his impression is that :—

1 They are made with metal knives from long bones, some of which could be of cattle

2 The curve at the tip of the specimens is intentionally made

3 They might have been used as part of wearing comb

SIMILAR FINDS

Almost exact parallels to our type A and B specimens from the Andhra workshop and the points from the stratified layers of Nasik, come from Taxila These correspond to the type 'a' and 'b' of MARSHALL, who describes them as arrow-heads [1] Type 'a' tools are from Strata II and IV, while type 'b' are from Strata II and III at Bhir mound In a recent excavation at Sirkap, GHOSH also found them at Sirkap.[2] At least one specimen is reported from Rairh [3] They also occur in Andhra layers at Kolhapur [4] SAHNI reports them from Sambhar and opines that they were used for scratching or lettering the pottery [5] The oldest specimens corresponding to our type AI specimens come from Mohenjodaro [6] MARSHALL describes them as awls set in a handle MACKAY, however, got specimens similar to our type B and called them tanged awls of problematic use [7] Subsequently he found them from Chanhudaro belonging to the Jhukar and Harappa periods [8]

1 J MARSHALL *Taxila* (1951) II p 664 pl 206 Nos 1 11 also ref Vol I pp 102 105 109

2 A GHOSH Taxila (Sirkap) *Ancient India* IV (1947 48) p 81 pl XXI Nos 14 15 1947 48

3 K N PURI *Excavations at Rairh* 1939 40 pl XXII No 16

4 H D SANKALIA and M G DIKSHIT *Excavations at Brahmapuri (Kolhapur)* (1945 46) p 126 Fig 25

5 D SAHNI *Excavations at Sambhar* p 19 pl XV No 7

6 J MARSHALL *Mohenjodaro and Indus Valley Civilisation II* 1931, p 54 pl CXXXII Nos 7 8

7 E MACKAY *Further Excavations at Mohenjodaro I* (1938) pp 420 421, pl CX Nos 29 10

8 E MACKAY *Chanhudaro Excavations* 1943 p 319 pl XCII No 29 Also ref Nos 28 and 30 32

BONE POINTS

Double-pointed bone objects resembling our type A specimens from surface, as well as some from the stratified layers, are found in the caves of Grimaldi [1] These are described as gouges Though our specimens are too recent to be compared to those of the Upper Palaeolithic times, it is interesting to note that similar objects are still in use in some parts of Europe [2] Among the Mesolithic artefacts of Europe, specially the Northern, gouges formed a substantial and important object in the cultural life of the people [3] Again, during the Neolithic period these are associated with Swiss lake dwellings [4] CHILDE attributes to the Nordics, in contrast to the Danubians, the use of rounded bone points sharpened at both the ends [5] The early Bronze Age cultures of Bohemia and Moravia had similar points and so also the urn-field cultures of Hungary and Lanoitz [6] They also occur in the Natufian cultures of Palestine [7, 8] In both these places these were termed as gorgets after GARROD In Egypt bone gorgets corresponding to our AI specimens and specially type A specimens from the surface layers were found in Badarian occupation layers at Mostagedda [9]

PROBABLE USE

The use of these implements may now be considered The material is bone The use of this specific material may be due to one or more of the following factors —(i) Its hardness (ii) Easy workability (iii) Rarity or high cost of other materials

Bone was a choice material during the Upper Palaeolithic and Mesolithic periods owing to the first two factors The same probably was the cause during the Neolithic period Its use during the Bronze Age was mainly due to the third factor In fact, even in Sialk I and II and in the Amaratian period we find bronze used only for ornaments or such valuable materials [10]

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1 J G D CLARK Development of fishing in Prehistoric Europe *The Antiquarian Journal* XXVIII (1946) p 46

2 *Ibid*, pp 46 7

3 J G D CLARK *Prehistoric Europe* (1951) p 42

4 CLARK *The Antiquarian Journal* XXVIII p 47 fig 3

5 V G CHILDE *The Danube in Prehistory* (1929) p 123

6 *Ibid*, p 288 327

7 D A E GARROD *The Stone Age at Mount Carmel* (1937) p 37 pl XII fig 2 Nos 11 12 and 18

8 F T PETRE *Excavations at Mugharet el Kebarah* *J R A I* 1932 Vol 62 p 272

9 G BRUNTON *Mostagedda* 1937 p 54 pl XXXII Nos 5 e and h

10 V G CHILDE *Archaeological Ages as Technological Stages* *J R A I* (1944) Vol 74, p 8

Our specimens in the stratified layers were accompanied by iron objects So the use of bone in this early historic period may be due to the third factor. If the primary factor was economy then the specimens were used for such objects which were needed in great numbers If they were used singly then there was a probability of break or loss Naturally their use as arrow-heads comes as a prime possibility The supposition is strengthened by the fact that at Michelsberg these are associated with two bows made of yew [1] MARSHALL also calls them as arrow-heads [2] The huge number of specimens is by itself an objection against the suggestion of these specimens being used as stilus [3] KAUTILYA mentions arrow-heads of bone for rending [4] But if these objects served as parts of a composite tool, weapon or ornaments then they could as well have served as teeth of combs, particularly for weaving [5] It is interesting to note that where these bone specimens were found is even now known to be a weavers ward Probably this dates from the Andhra period [6] Some of the specimens, specially some of the surface finds, might have been used as gorges

Thus, these various types of bone points could and might have been used for a variety of purposes, as arrow-heads, ornaments and comb-teeth for wearing The bent, curved or wavy types forming a considerable number still remain to be accounted for Whatever be the exact purpose of these and others there is little doubt that in this layer of bone points at Nasik, we have evidence of an extensive bone industry of the Early Christian Era

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1 V G CHILDE *Danube in Prehistory* (1929) p 17)

2 J MARSHALL *Taxila* Vol II p 664

3 A GHOSH *Taxila* (Sirkap) *Ancient India* No 4 p 81

4 *Kautilya s Arthsastra* ed by Ganapati SHASTRI Vol 1 p 253

5 Mrs I KARVE saw these types of comb teeth used among the tribal population in Orissa

6 This is not impossible in India where sections of a village or a town are occupied by various castes or followers of certain professions such as sweepers weavers goldsmith and continue to remain so unless disturbed by present day housing shortage

APPENDIX I

Chart No 1

SHOWING THE VERTICAL DISTRIBUTION OF BONE OBJECTS AT NASIK

Objects	MG N layer (1)	MG N layer (2)	MG N layer (3)	MG N layer (4)	MG N layer (5)	MG N layer (6)	K W M. layer	MG E N layer	MG S.N layer	Other sites	Remarks
A Double-ended points	No. 1	Nos 24 26 135 13_A	Nos – 8 440	—	No 163	—	No 58 layer da(2)	—	—	Surface Andhra Workshop (W S)	
B Tanged points	—	—	—	—	—	—	—	No 89_ layer Ie(3)	Middle stratum No "94	(1) Surface ( ) Andhra W S	Conspicuous by its absence in the MG N layers
C Modelling tool (simple)			—	—	No x	—	No 86 layers d2(3)	—	—	—	
D Modelling tool (ball pointed)					Nos. 187 "46	—	—	—	—	—	
E KOHL Sticks		Nos 1? 127A 127 127B			—	—	No x layer C5(?)	—		—	
F HANDLES of objects					No 206	—	—	—	—	—	
G Dentilium be d (?)					No 5724	—	—	—	—	—	
H Other objec s of fi h finl h and excel ent w k mnsl i[					No 576 620		—	—	—	—	

CHART No 2—TYPE A SPECIMENS[1] (TOTAL 771)

Sub-type	Sub-group	Total No. of specimens	No of complete specimens	No of specimens having one end broken	Nos. having both ends broken	No. with complete body	Nos. having incomplete body	Length of specimens mm	Maximum breadth of specimens m	Remarks
I	a1	11	Nil	3	8	9	2	57 92	6-8	
I	a2	11	1	3	7	4	-	4? 83	6-9	In one specimen body shows fibrous decay
I	b1	1	3	7	10	13	4	44 90	5-8	A group of 8 has got length 46 + 2 mm a breadth 6+1 mms.
I	b2	[illegible]	1	6	20	15	12	39 -7	5-10	The shortest in length in one case has the maximum breadth.
II	a1	20	9+11 doubtful		Nil	19	1	45-85	4 -	The best finished group
II	a2	23	6+6 doubtful	9	2	17	6	52-84	5 3	
II	b1	3	3 doubtful	—	—	3	—	49-5-	6	
II	b2	5	1+2 doubtful	1	1	4	1	51 60	5-?	
II	c1	1	1	—	Nil	1	—	65	7	
II	c2	2	1+1 doubtful	—	Nil	2	—	57 74	- 6	
III	a1		2+1 doubtful	2	2	6	1	53 100	7 3	In finish this group is only next to IIIa
III	a2	[illegible]	4	3	5	9	3	9 83	5-9	
III	b1	2	2	—	—	2	—	65-71	6 7	
III	b2	2	1 doubtful	—	1	1	1	71-74	7 6	The longer is thinner

IV	a1	1?	11+3 doubtful	[illegible]	—	14	3	47 77	5·7	
IV	a2	-	1	1	—	-	—	19·71	7 6	Shorter is broader
V	a1	107	10	25	9	63	12	36 92	4 8	Kinship to groups I-11 VII-21 III-19 V-20 always indefinite 23 a
V	a2	1	61	21	6	85	20	35-91	45 9	Kinship to groups I 6 VII 10 III-34 VIII-7 always V-5 Indefinite b 57
V	b1	177	98	32	20	1?	26	44 84	4 9	Kinship to groups II 28 VII-10 IV 29 Indefi- always nite-84 a VI-17
V	b2	106	54+14 doubtful	20	3	6?	??	41·94	6·9	Kinship to groups II 10 VII 20 IV-18 VIII-3 always VI 6 Indefi- b nite 49
VI		103	30+2 doubtful	41	30	84	10	35 92	4·10	

1 All the sub-types excepting sub type II are again divided as follows —

a1 — polished, with circular or nearly circular sections

a2 — „ „ other sections.

b1 — Unpolished with circular or nearly circular sections

b2 — „ with other sections

In case of sub-type II we have a1, a2, *b1* and *b2 like other groups, Moreover*

c1 — classical bow shaped with circular or nearly circular sections.

c2 — „ „ other sections

CHART No. 3 TYPE B SPECIMENS (TOTAL 728)

Sub-Type	Sub Group	Total No. of specimens	No of Complete specimens	No of specimens with Tang broken	No of specimens with Point broken	No of specimens with both ends broken	No of specimens having a Complete body	No of specimens having Incomplete body	Length of the Body of specimens of the group	Breadth of specimens of the group	Length of the Tang of the specimens of the group	Breadth of the Tang of the specimens of the group	Measurental Groups: No. of specimens	Length of Body	Breadth of Body	Length of Tang	Breadth of Tang	Remarks on the Sub Groups	General Remarks
	a1	-	Nil	•	2	2	5	2	32-56	6 11	—	—	1	32 mm	8	—	—		No relation with the length of the body and thickness or the contour of the body
													1	53 mm	6	—	—		
													1	54 mm.	6	—	—		
													4 to 56 mm	55 mm. to 11 mm	7 mm	—	—		
	a2	2	Nil	2	1	1	2	Nil	57 64	7 8	—	—	1	57	•	—	—		These two specimens are much inferior in workmanship to the Ia group.
													1	64	•	—	—		
	b1	35	2+3 doubtful	25+5 partial	13	12	33	2	33 78	6-10	16 25	5-6	4	3- 38	8-8	—	—	In two specimens tang present	Excepting these A specimens grouped in different measurements, other specimens are too varied to come under any group.
													3	33	7	16	5-55	tang in one specimen.	
													11	47 48	7 9	25	6		
													8	57 58	7 8	—	—		
													2	31	7	10	5	tang in one specimen.	Measurements of the broken tang are given on reconstruction
													3	37 38	7 8	13 & 10	5 & 6	tang in two specimens.	
													9	40 41	7 8	14 & 17	5-6	tang in 2.	
	b2	23	4+3 doubtful	17+4 partial	12	12	28	2	31 72	5-9	13-18	5-65	6	51 52	7 9	17	6-5	tang in 1 specimen.	
													2	54 55	7-8	14	6	tang in 1 specimen	
													5	62 63	7 8	—	—		
													1	72	5	—	—		

1 Excepting in the case of Sub-type I all the other groups are divided as follows—
a1 — with circular or *nearly circular cross section*
a2 — with other cross sections

In case of sub-type I, we have in addition
b1 — rough finish, with circular or nearly circular section
b2 — „ „ with other sections

Measurements always in mm

a1	94	21	44+13 partial	43	30	89	5	33-71	5-11	16-27	5-7	—	—	—	—	—	—	Due to the different type and intensity of the curvature in the body it is difficult to make *groups*.
a2	80	2+4 doubtful	33+13 partial	36	6	77	3	32-56	5 to 10	15 to 25	4-7	—	—	—	—	—	—	-Ditto-

1 Measurements always in mm and when the specimen is broken measurement of the reconstruction given

CHART No 3 TYPE B SPECIMENS (TOTAL 728)—Cont

Sub-Type	Sub-Group	Total No of specimens	No. of Complete specimens	No of specimens with Tang broken	No of specimens with Point broken	No. of specimens with both ends broken	No of specimens having a Complete body	No of specimens having Incomplete body	Length of the Body of specimens of the group	Maximum Breadth of the specimens of the group	Length of the Tang of the specimens of the group	Breadth of the Tang of the spec mens of the group	Measuremental Groups: No of speci mens	Length of Body	Breadth of Body	Length of Tang	Breadth of Tang	Remarks on the Sub Groups	General Remarks
III	a1	16	1	8+5 partial		3	14	4	35 68	6 8	13 23	4 6	1	35	6	—	—		
													[illegible]	35	7	13	5 5 5	In one 5 other 5 5	
													3	35	8	16	6	Tang in two specimens.	
													2	42	7	16	5 & 5 5	Tang in both	
													2	51	6	17	4	Tang in one specimen.	
													2	31	8	1	6	Tang in one specimen	
													1	55	7	—	—		
													[illegible]	64	7	—	—		
													1	68	6	23	4 5		
													2	68	8	—	—		
	1		VII	3+2 partial	6		10	1	37 68	6 9	13 20	5 & 5.5	4	37	7	13 & 15	5 & 5 5	Tang 2 13×5 5 5 1 15×5	
													2	44	7	20	5 5	Tang in 1	
													[illegible]	50	6	—	—		
													1	61	7	—	—		
													1	68	7	20	5		
													1	68	9	—	—		
													1	33	7	23	6		
													2	41	[illegible]	13	6	Tang in one specimen.	
													3	50	7	13 & 24	5 & 6	Tang in two specimens.	
													1	53	7	—	—		This group shows the variation in measurements.
													1	54	8	29	6 5		
													3	56	7	—	—		
													1	57	6	22	5		
													1	56	8	—	—		
IV	a1	24	8+2 doubtful	5+4 partial		2	23	1	33 71	6 9	13 25	5 7	1	60	7	—	—		
													1	60	9	—	—		
													1	6[illegible]	8	—	—		
													3	66	7	[illegible]5	5 5 6	Tang in two specimens	
													2	6	8	13	6 5	Tang in one specimen	
													1	69	8	—	—		
													1	0	8	18	6 5		
													1	1	9	24			

	a2	11	4	1+2 partial	1	1	11	Nil	38 70	6-9	7 21	5 5 6	1	38	8	–	5	
													2	40	7	12	5 & 6	Tang in both
													2	50	8	19 & 21	6 5	
													4	53	6 8	21	5 & 6 6	Tang in two specimens
													1	70	8	21	6 6	
														70	9	—	—	
V	a1	29	8	8+4 partial	10	4	27	2	41 78	5-9	19 25	5-6	—	—	—		—	Impossible to bring them in any group
	a2	22	5	7+4	8	3	18	4	39 73	6-9	15 29	5-6	—	—	—	—	—	Ditto
													1	42	6	20	5	
													2	42	7	—	—	
													9	45-47	7 8	14/17/19	0/5 5/6	Tang in three specimens.
													6	50 51	9-9	26/16	5/6	Tang in two specimens
VI	a1	51	6	39	8	—	49	2	42-88	6 9	14 28	5-6	11	63-64	7 8	22/28	5/6	Tang in two specimens.
													13	59-60	6-7	21	6	Tang in one specimen
													2	69	7/9	—	—	
													1	85	8			
													1	83	9			
	a2	25	2	20+1 partial	5+2 partial	3	22	3	43-82	6 10	13-26	5-7	1	43	6	—	—	
													2	47	7 8	19	6	Tang in one specimen
													4	54	7	14	5 5	do
													2	61	–	—	—	
													3	63	8	—	—	
													1	64	8	—	—	
													2	64	7	22/25	5/5 5	Tang in both
													1	65	6	—	—	
													1	65	8	—	—	
													2	65	9	—	—	
													1	66	10	—	—	
													3	73	7	—	—	
													2	82	8/10	13	7	Tang in one.

CHART No. 3 TYPE B SPECIMENS (TOTAL 728)—contd

Sub-Type	Sub-Group	Total No. of specimens	No. of Complete specimens	No of specimens with Tang broken	No. of specimens with Point broken	No. of specimens with both ends broken	No. of specimens having a Complete body	No of specimens having Incomplete body	Length of the Body of specimens of the group	Maximum Breadth of the specimens of the group	Length of the Tang of the specimens of the group	Breadth of the Tang of the specimens of the group	Measurental Groups: No of specimens	Length of Body	Breadth of Body	Length of Tang	Breadth of Tang	Remarks on the Sub-Groups	General Remarks
VII		21	Nil	18	13	11	5	16	—	—	—	—	—	—	—	—	—		Measurement will not give any idea
													1	23	6	—	—		
													2	36	6	16/18	5'5.5	Tang in both.	
													6	41-42	6 7	13	5	Tang in one specimen.	
VIII	a1 almost straight	55	3	40+3 partial	15	8	49	6	28 71	6 10	13-19	5 7	7	49	7	—	—		
													10	53 54	6-9	19	5/6	Tang in two specimens.	
													5	46	7-9	18	6	Tang in one specimen.	
													6	60	6-8	13	5		
													1	62	9	—	—		
													7	67	7-10	—	—		
													10	71	6-9	13	6	Tang in one specimen.	
													1	41	7	—	—		Continued from measurement column. 1 77×9 1 81×7
													4	43	6	—	—		
	a1 slightly curved	30	Nil	2 +6 partial	13	8	31	5	41-81	5 10	20 34	5 6	1	46	7	—	—		
													1	50	8	—	—		
													2	50	7	—	—		
													2	51	6	20	5	Tang in one.	
													1	56	6	22	5		
													2	59	8	23/24	6		
													1	59	7	—	—		
													2	61	7	—	—		
													1	61	8	—	—		
													1	62	7	—	—		
													1	64	6	—	—		
													1	65	8	—	—		
													1	67	5	—	—		
													1	68	6	—	—		
													2	68	7	—	—		
													2	68	8	31	6	Tang in one specimen.	
													1	70	5	—	—		
													2	70	7	—	—		
													1	70	10	—	—		
													1	73	8	—	—		

VIII	a1 curved	13	Nil	11	5	[illegible]	10	3	—	—	—	—	—	—	—	—	—	Measurement is not practicable	This group stands in between the groups previously described but cannot be included into the regular curved group.
	a1 akin to sub-type	18	1	13	7	2	17	1	—	—	—	—	—	—	—	—	—		Ditto
	a1 akin to sub-type	17	1	13	6	2	1	2	—	—		—				—		—	—
	a1 but to a lesser degree.	9	4	3	2	2	[illegible]	4					—	—	—	—	—	—	—
											13 22	45-6	2	31	6	21	4 5	Tang in both.	Rest of the specimens cannot be grouped together
	a2 Straight sub-type II	67	8	39	7	—	32	5	31 72	5-10	—	—	9	42	8-10	13-17	5-6	Tang in five specimens.	
													5	45	6 9	15/17	5/6	Tang in two specimens.	
													2	48	7/8	13	6	Tang in one specimen.	
													11	56	7 9	13-17	5 6	Tang in four specimens	
													6	[illegible]	8 10	22	6	Tang in one specimen	
													5	[illegible]	7 8	13	6	Tang in one specimen.	
VIII	a2 curved	16	4	12	3	2	15	1	—	—	—	—	—	—	—	—	—	—	—
	a2 Sub-type V	22	5	12	3	1	21	1	—	—	—	—	—	—	—	—	—	—	—
	a2 Sub-type VI	21	7	9	6	3	21	Nil	—	—	—	—	—	—	—	—	—	—	—
	a2 Indefinite	6	Nil	3	4	1	6	—	—	—	—	—	—	—	—	—	—	—	—

APPENDIX II

Identification of Bones

By

Professor J. C George,

Head of the Department of Zoology,
The M. S University of Baroda.

Antiquity No.		*Layer No.*	*Excavated Bone*	*Identification*	
364	MG N.	5	Left lower jaw	(Cristatus)? Sus sp.	Domestic pig
389	,,	,,	Cervical vertebra	Capra or Ovis	Goat or sheep
392	,,	,,	Excreta of a carnivore	eg	Dog ?
524	,,	,,	Astragalus	Bos indicus	Ox
555	,,	,,	Incisor tooth	Rattus rattus	Rat
556	,,	,,	Right upper jaw	Bos indicus	Ox
564	,,	,,	Right upper jaw } Left upper jaw }	Sus sp	Domestic pig
565	,,	,,	Neck vertebra	Bos indicus	Ox
571	,,	,,	Molar tooth	,, ,,	,,
574	,		Right lower jaw	Sus sp	Domestic pig
630	,,	,	Left lower jaw	Bos indicus	Ox
632	,,	,	Left upper jaw with last two molars	Sus sp	Domestic pig
637	,,	,,	Right upper jaw	Bos indicus	Ox
662	,,		Right upper jaw	Sus sp	Domestic pig
691	,,	,,	Incisor tooth of the right lower jaw	Bos indicus	Ox
692	,		Portion of lower jaw	Tetraceros quadricornis	Four horned antelope
726		,	Left lower jaw	Sus sp	Domestic pig
727	,,	,	Molar tooth	, ,,	,, ,,
763	,,	,,	Proximal end of ulna	Capra or Ovis	Goat or sheep
799	,,	,,	Right lower jaw	Sus sp	Domestic pig
800	,,	,,	Right lower jaw	,, ,,	,, ,,
801	,,	,,	,, ,, ,,	,, ,,	,, ,,
802	,,	,,	Last molar	Cervus unicolor	Sambar deer
816	,,	,,	Left lower jaw	Sus sp	Domestic pig

Antiquity No	*Layer No*		*Excavated Bone*	*Identification*	
817	MG N	5	Right lower jaw	Sus sp	Domestic pig
823	,,	,,	Canine teeth (upper and lower jaw)	,, ,,	,, ,,
5027	,,	,,	Left upper jaw	Semnopithecus	Common Langur monkey
			Antlers	Axis axis	Chital or Spotted deer
5051	,,	6	Right upper jaw	Bos bubalus	Buffalo
361	,,	2	Molar tooth	Sus cristatus	Domestic pig
434	,,	3	Scapula	Bos indicus	Ox
432	,,	,,	Distal end of humerus	,, ,,	,,
104	,,	4	Metacarpal right side	Sus sp	Domestic pig
523	,,	,,	Right lower jaw	Ovis	Sheep
544	,,	,,	Incisor tooth of left lower jaw	Cervus unicolor	Sambar deer
579	,,	,,	Canine tooth	Sus sp	Domestic pig
684	,,	,,	Premolar teeth of upper jaw	Cervus unicolor	Sambar deer
781	MG E.N	2	Left upper jaw	Sus sp	Domestic pig
649	MG S N	1	Portion of carapace	Trionyx sp	Turtle
710	,,	4	Horn	Boselaphus trago camelus	Nilgai
797	,,		Tooth	?	?
5239	MG N	5	Rib portion	Bos indicus	Ox
5240	,,	6	Upper jaw fragment	,, ,,	,,
799			Right lower jaw	Sus sp	Domestic Pig

APPENDIX III

Identification of Shells (Excavated at Nasik and Jorwe).

By Dr H C Ray, Asst Zoologist, and Shri A S Rajagopalaiengar, Zool Asst.

Zoological Survey of India, Calcutta

Locus No		*Layer*	
K W. N	66b	2	*Ornamentaria annulus annulus* (Linn)
,,	66i	,,	,, ,, ,,
MG.N	504a	4	*Gratiadusta pallida pallida* (Gray)
,,	504b	,,	,, ,, ,,
K W.N.	66f	2	,, ,, ,,
,,	66c	,,	*Nerita chameleon* (Lamk)
,,	66a	,,	*Dostia crepidularia* (Lamk)

Locus No		Layer	
K.W.N	66m	2	*Melanoides (Melanoides) pyramis* (Hutton)
,,	66h	,,	*Viviparus bengalensis* (Lamk.)
,,	66o	,,	*Xesta semirugata* (Beck)
,,	66k	,,	*Viviparus bengalensis* (Lamk.)
,,	66d	,,	,, ,, ,,
,,	66g	,,	,, ,, ,,
,,	66j	,,	Bleached specimen—not possible to identify
MG N	437a	5	*Indonaia caerulea* (Lea)
,,	437k	,,	,, ,, ,,
,,	437j	,,	,, ,, ,,
,,	437h	,,	,, ,, ,,
,,	437f	,,	*Parreysia favidens* (Bens.)
,,	437d	,,	,, ,, ,,
,,	437v	,,	,, ,, ,,
,,	437q	,,	,, *wynegungaensis* (Lea)
,,	437c	,,	,, ,, ,,
,,	437n	,,	,, ,, ,,
,,	437p	,,	,, ,, ,,
,,	344		,, *favidens* (Bens)
,,	344b and 344f		,, *wynegungaensis* (Lea)
,,	344c		,, *favidens* (Bens.)
,,	344d	,,	,, *wynegungaensis* (Lea)
,,	382j		,, ,, ,,
,,	382c		*Indonaia caerulea* (Lea)
,,	344e	,,	*Parreysia wynegungaensis* (Lea)
,,	437l	,,	,, ,, ,,
,,	129	3	*Conus sp*
K W N.	42	X	*Xancus pyrum* (Linn.)
MG N	304a	5	*Parreysia wynegungaensis* (Lea)
,,	304b	,,	*Lamellidens sp*
,,	382k	,,	,, ,,
,,	437i	,,	*Parreysia wynegungaensis* (Lea)
,,	437m	,,	,, *favidens* (Bens.)
,,	437r	,,	,, ,, ,,
,,	437t	,,	,, ,, ,,
,,	437w	,,	,, *wynegungaensis* (Lea)

Locus No		*Layer*	
K W N	88e	3 4	*Parreysia wynegungaensis* (Lea)
,,	88c	,,	,, ,, ,,
,,	88b	,,	*Parreysia sp*
MG.N	437u	5	*Indonaia caerulea* (Lea)
,,	437s	,,	,, ,, ,,
,,	382a	,	*Parreysia favidens* (Bens)
,,	382b	,,	,, ,, ,,
,,	382e	,,	,, ,, ,,
,,	382f	,,	,, ,, ,,
,,	382h	,,	,, ,, ,,
,,	382i	,,	,, , ,,
,,	129a	,,	,, ,, ,,
,,	129b	,,	,, ,, ,,
,,	129c	,,	, ,, ,,
,,	129d	,	,, ,,
With no number			*Oliva ispidula* (Linn)
MG N	344a		,, *subulata* (Lamk)
,,	600	,,	*Oliva sp*
	304E	,,	,,
,,	(5)C7		*Conus sp*
Jorwe			*Telescopium telescopium* (Linn)
MG S N	896		*Cantharus undosus* (Linn)
With no number			,
K.W N	88	3 4	*Murex sp*
,,	661	2	*Viviparus bengalensis* (Lamk)
MG.N	588	5	*Gratiadusta pallida pallida* (Gray)
,	192	,	*Xancus sp*
,,	3821		*Lamellidens sp*
,,	139	3	*Cyrena impressa* (Desh)

In Pot 2B (5) MG N —Broken pieces of a bivalve shell

The collection of shells excavated at Nasik and Jorwe appears to include representatives of different forms, such as, land (*Xesta semirugata*), fresh water (*Viviparus bengalensis*, *Parreysia favidens*, *Lamellidens* sp), brackish (*Dostia crepidularia*) and marine (*Xancus pyrum*, *Nerita chameleon*, *Ornamentaria annulus annulus*, *Oliva* sp and *Conus* sp), all of which belong to the existing genera and species, but none to any extinct form The shells of *Ornamentaria annulus annulus* might have been used by the people of that area, like those of other parts of our country, as the medium of exchange along with *Nonetaria moneta* and also for ornamental and

decorative purposes. The shells of *Xancus pyrum* or 'Sacred Chank', as it has been commonly called, is highly esteemed by the Hindus even today for religious purposes and is also used in the manufacture of bangles, rings and other ornaments—this industry has greatly flourished at Dacca, now in East Pakistan, though it is abundantly found in the Gulf of Mansar, particularly at Tuticorin. The shells of *Conus*, *Nerita* and *Oliva* are known to be used by the tribal people and islanders for decorative purposes in view of their brilliant colouration and markings.

The food value of molluscs has been realised by men since very early times. The animals of *Viviparus bengalensis* and those of *Lamellidens* and *Parreysia* are known to be highly esteemed as food even today by the poor class people. Not only that, their shells are also used in the manufacture of lime, ordinary buttons, rings, etc.

PART II

EXCAVATION AT JORWE

I

Situation and Antiquity

Jorwe[1] (E. Long 74.17° and N. Lat. 19 33°) is a small village on the north or the left bank of the Pravara river. It is about 5 miles due east of Sangamner, which is also on the same side of the river, and a taluka place of some importance in Ahmadnagar district. Both Jorwe[2] and Sangamner,[3] as well as other villages in the vicinity, can boast of some antiquity In fact, by the 11th century, they are mentioned in some of the Yādava inscriptions of Saka 991 (A D. 1069) and Saka 1020 (A D 1098), as Jumyaravegrāma and Samgama-nagara or-nera respectively.

However, the ancient mounds at the former place remained unknown and unnoticed They would have remained so had they not been occupied during the heavy floods in 1947 by the villagers who previously lived along the river bank Owing to this occupation these deserted sites began to yield pottery and other objects Some of the former were found intact and were brought in use again Since most of these were painted and had spouts they appeared unusual. For such vessels are not made now This attracted the attention of Shri Shankar Annaji SALI, a young officer in

1 Survey sheet, Government of India, 1 inch = 1 mile No 47 I/6 and I/2

2 *JBBRAS*, (NS) III, p 189 and *Quarterly of Bhārat Itihāsa Samshodhak Mandal* (Poona), III (1922) p 4

3 *EI*, II, p 217

the Taluka Development Board at Sangamner He announced this discovery in a daily paper called "Dainik Bhārat," also relating the local tradition about Jorwe This says that Jorwe is the ancient Jarāsandha-nagara (a town founded by Jarāsandha, a famous and powerful king who besieged Mathurā, the Yādava capital 21 times and ultimately drove Krishna out to Dwārakā He was finally killed in a duel by Bhīma with the help of Krishna)

A cutting of the report was sent to me by Shri N A Gori, then the Secretary, Extra-Mural Department of the University of Poona It was received just before we were starting for excavations at Nasik Dr M G Dikshit immediately contacted Shri Sali and requested him to see him at Sangamner with the pots Thus, before we began the work at Nasik, we had in our possession objects, which later turned out to be the most ancient vessels in the Deccan Jorwe was then twice visited, once with Shri A Ghosh, the present Director General of Archaeology in India Other sites in the vicinity, particularly Javale Kadlag (old Jamvalemmva grama), were also examined Besides a large mass of painted pottery, microliths were also collected We doubted, however, whether these two were contemporary and whether the former were not of the Muslim period ! For these might be an intrusion in an older microlithic culture

These doubts were laid at rest when sherds and a spout, identical with those noticed in Jorwe painted pots, were found in the lowest black soil layer and that too associated with microliths, at Nasik It was then that we decided to have a trial dig at Jorwe in the short time and funds that we had at our disposal A larger excavation was also precluded because of a great scarcity of labour, it being the harvest time

II

The Site

The site, as the excavation showed, is a one period site There are no debris of later period So the mounds which might be occasionally eroded, appear remarkably low [pl XXX] In fact, they do not look like mounds The entire village seems to have a slightly elevated level, compared to that of the river Any way, these areas are at least half a mile away from its present river bed There alone the ground is strewn with chalcedony flakes and potsherds

However, in our selection of the site we were guided by a spot where, during our first visit we had found intact two painted pots, one

PLATE XXX



a



b

General view of Mounds, Jorwe

(a) Distant view

(b) Close-up

(*See p. 145*)

SECTION: TRENCH 1
EASTERN WALL
JORWE

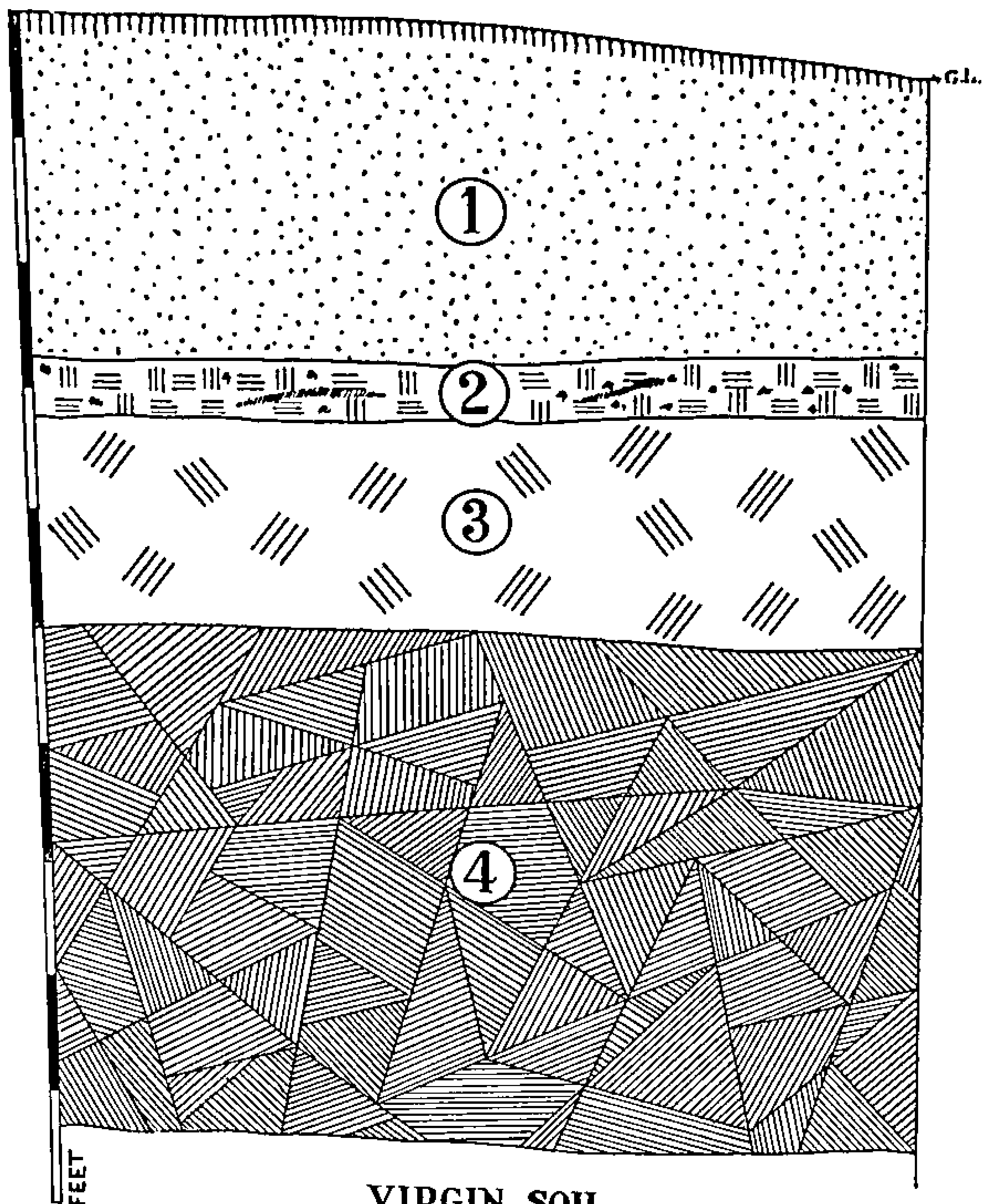


Fig 57a

(*See p. 149*)

covering the mouth of the other, and some bones within. This had led us to expect some burials there. But surprisingly all the five pits dug by us yielded nothing but a large mass of painted and unpainted pottery, microliths and only one tubular bead of smoky chalcedony. The excavated debris went to a depth varying between 6 to 9 feet, and though divisible stratigraphically into four layers, from the contents seem to belong to one cultural period only. Owing to this impression the pottery and microliths, though collected very carefully and stratigraphically, were later mixed up. With regard to the former, however, it appears, after laboratory studies, that perhaps it would have been better if the *collection from each layer* had been kept separate.

STRATIFICATION

The stratification in the five pits was as follows :—

Layer	JrW I 5'×10'	JrW II 5'×14'	JrW III 5'×10'	JrW IV 5'×10'	JrW V 5'×10'
1	Loose brown earth upto 2'9" *from* GL	Loose brown earth upto 2'9"	Loose brown earth upto 2'9"	Loose brown earth upto 2'8" At 2'6" a pair of pots with ash and bones	Loose brown earth upto 2'9"
1a		Layer of gravel 2'6" *Jar with* bones	Layer of gravel 2'6" *Jar with* bones		
1b	.		Band of black ash		Band of black ash
2	Ash and charred earth (3'3") from GL	White ash band	Loose blackish soil	Ash and charred earth.	Ash and charred earth
2a			Ash band		
3	Loose black soil	Loose black soil	Loose black soil	Loose black soil	Loose black soil
4	Black sticky clay	Black sticky clay	Black sticky clay	Black sticky clay	Black sticky clay
	Virgin at 9'4"	Virgin 6'	Virgin 6'	Virgin 6'	Virgin 6'

27

III

Chronology

Since there are no.debris of several periods, we cannot have even a relative chronology based on stratigraphy. To have some idea of this culture, recourse must be had to the finds and their typological affinity with similar finds from other sites. The affinity of Jorwe painted pottery, particularly the spouts painted along their length, with a single but identical spout at Nasik [Period I] suggests that the Jorwe culture may be at least contemporary with Nasik I. Its microlithic industry exhibits features which are again identical with those found in extremely well-stratified context at Nāvḍā-ṭoli on the Narmadā. [See Map]. Here too, the industry belongs definitely to a proto-historic period, and is associated with a richer painted pottery complex, and a little copper or bronze. Further, six flat celts of low grade bronze were also discovered in a painted pot just before we began our work at Jorwe. It would be, therefore, not unjustified if the Jorwe culture is assigned provisionally to a Copper or Early Bronze Age period, before the Early Historic.

IV

Microliths

The Jorwe microlithic material is primarily from the five small trenches, with which the surface collection has got unfortunately mixed. And since the layer number as well as the serial number have not survived on each specimen, it is often impossible to distinguish between the surface and the excavated material. From the nature of the mound, however, one may say that those from the surface belong to the top layers of the same cultural period, as there are, in fact, no debris of a later occupation. The distribution of the excavated material, *as noted on the field*, is given below. The results of the final study are indicated separately.

		Cores	*Flakes*	*Blades*	*Chips*	*Scraper*	
Layer (1)	..	18	15	50	16	1	
,, (2)	..	8	14	16	1	..	
,, (3)	..	11	19	18	5	..	
		37	48	84	22	1	=192

About 47 pieces were collected from the surface. Thus, in all, we have had stratified pieces 192
Surface pieces 47

Total .. 239

The material is mainly milky chalcedony, but at times there are specimens of chert, crystal, carnelian and red jasper. Including the unworked as well as rough types of cores and flakes, we have :—

- i 50 Cores
- ii 32 Chips
- iii 21 Flattish blade chips
- iv 63 Flakes, rectangular or pointed at one end, parallel sided, edge unretouched, with mid ridge, at times even in the process of removal
- v 73 Flakes, as (iii) (iv) above, but with flat, rectangular flake scar Some of the last do bear retouch, and have signs of use, hence they are further discussed under finished tools

Total 239

Distribution

The discovery of microliths at Jorwe, a site in North Deccan, came as a welcome surprise. It not only fills in an important gap in the distribution of this lithic industry between Gujarat, Central Provinces and Central India in the north, and Andhra-Karnatak, and Tamilnad in the south, but its character seems to open before our eyes the vista of a vast protohistoric culture, which probably comprised (excluding Gujarat) all the regions mentioned above [1] How far this optimistic outlook will be fulfilled, only future research can tell. The immediate importance of the discovery is that we now have definite clues with which to search for remains of proto-historic cultures in the Deccan Presence of occasional and uncertain specimens with which the river gravels and the plateau are strewn were no certain guides This had discouraged further work in the same direction [2]

Character

Though in the absence of a more suitable term the industry has to be called microlithic, owing to the preponderance of blades, parallel-sided flakes, and fluted cores, it may be further qualified as " the Microlithic Blade Industry of Jorwe " It exhibits what is termed " Crested guiding

1 Dr SUBBA RAO of the M S University of Baroda informs me that a few sites in Saurashtra have also yielded specimens of identical industry What the exact character of the Brahmagiri industry is, it is difficult to say No cores seem to have been found or are described It did have lunates, two edged and one edged blades, besides a few burins, chisel ended points and scrapers If drawings and photographs be any guides, then one specimen, included among 'double edged blades without retouch (Type I), (No 7, pl CXIV and Fig 34), should be described as a "ridged flake" by cross flaking (*Anc Ind*, No 4, 250 53)

2 SANKALIA, H.D " Studies in Prehistory of the Deccan (Maharashtra), " *Bulletin of the Deccan College Research Institute*, Vol IV, p 186 ff and Vol VI, p 131 ff

flake and Keeled core technique."[1] The object seems to be to have parallel-sided flakes which can be further trimmed into blades by retouching. This is apparent both from the number of such flakes, and blades and cores. At least four cores have a ridge made by alternate flaking along their length. This is almost on the other side, which already possesses a number of parallel flake scars. Normally this would suggest that such cores are ready for further flaking, the ridge serving as a guide. But some cores are so thin that it is doubtful if they could be further flaked. If so, the purpose of the ridge remains unexplained, unless it is presumed that the ridge is never removed, but remains till the last. When this stage was reached, it appears that the cores themselves were put to use. For in some instances, the cores are made almost flat and thin by delicate cross-flaking. This is so fine, at times, as to remind one of "ripple" flaking on Egyptain Neolithic tools from the Fayum Desert, for instance.[2] It is also a question whether in this industry a ridge was always prepared prior to flaking. For in one case (Fig. 58, 1), nearly 3/4 of the cortex of a cylindrical nodule is found intact, while the rest of the surface has two parallel flake scars, with a simple platform on either end. In nearly all cases of flattish cylindrical fluted cores only one half of the circumference is found flaked around. These cores have faceted platform, forming nearly a right angle with flaked surface. Technologically, thus, the collection is divisible into the following types :—

I *Cores*[3]

i Core, flaked around, section rectangular, flat faceted platform on one end

No 38, Jrw 32 mm long, 12 mm broad, 11 mm thick (Fig 58, b)

ii Core, fluted on one surface, with ridge on the other by cross flaking, section triangular

No 175, Jrw 32 mm long, 12 mm broad, 11 mm thick (Fig 58, c)

No 259, Jrw *24 mm long*, *12* mm broad, 6 mm thick, Flat faceted platform at one end (Fig 58, d)

iii Core, fluted on one surface, ridge on the side, other face convex, section biconvex.

No 239, Jrw. 30 mm long, 14 mm broad, 12 mm thick, Flat faceted platform at one end (Fig 58, a, and pl XXXI, 9)

No 241, Jrw One end has a faceted paltform, the other has a bevelled sharp edge, 24 mm long, 14 mm broad, 14 mm thick (Fig 58, f, and pl XXXI, 6)

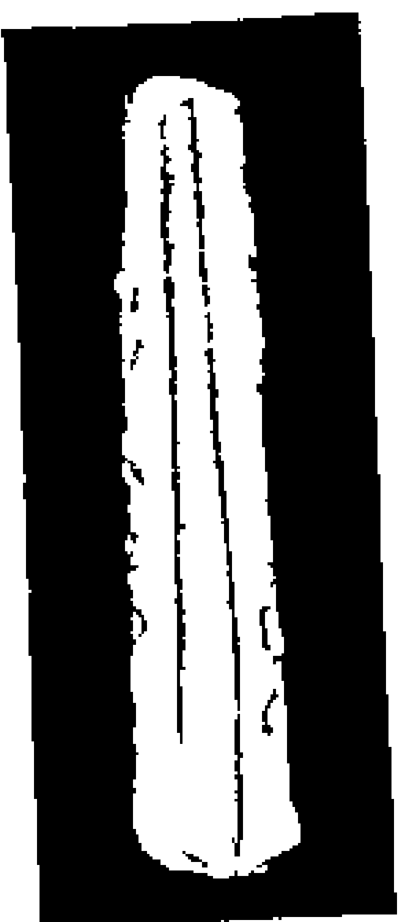
No 188, Jrw 32 mm long, 12 mm broad, 9 mm thick (Fig 58, g)

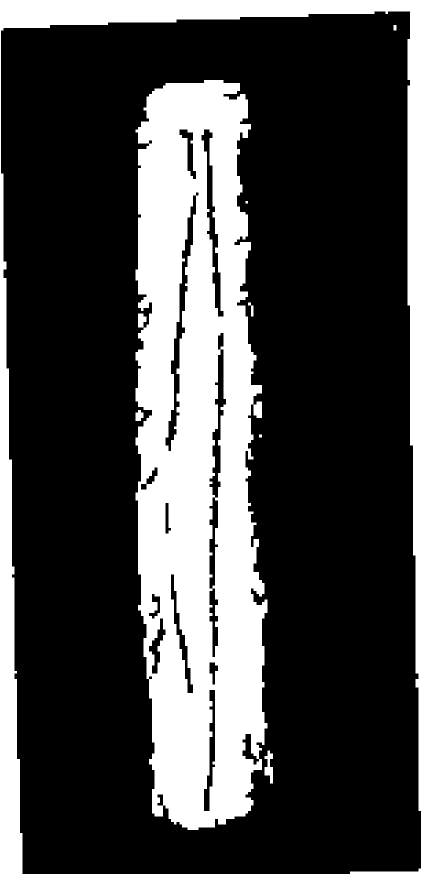
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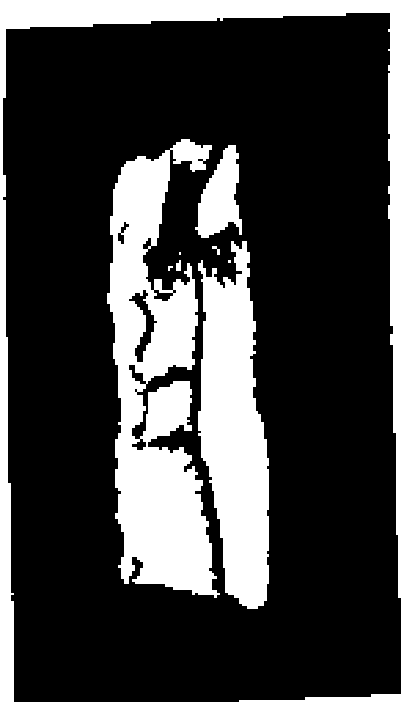
1 Donmez, Ahmet and Brice, W C, "A Flint Blade Workshop near Gazintep, South Turkey" *Man* (1951), p 76-77

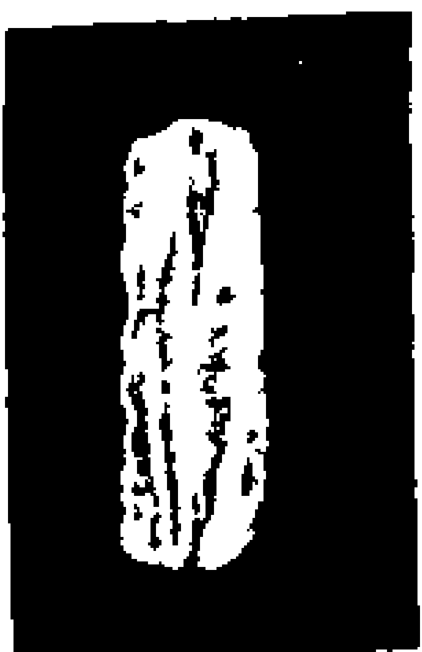
2 See G Caton Thompson and E W Gardner, *The Desert Fayum*, Plates (London, 1934), pl XLVI

3 Unless otherwise mentioned, the material in all these cores and flakes is milky or smokey chalcedony



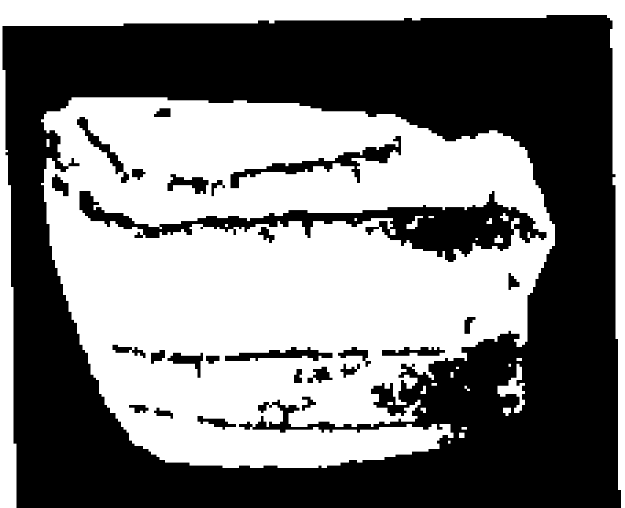




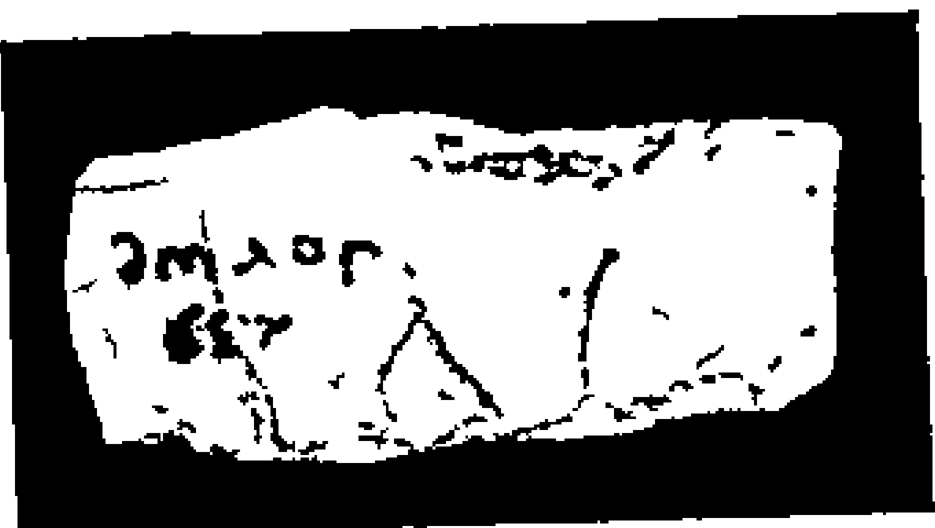
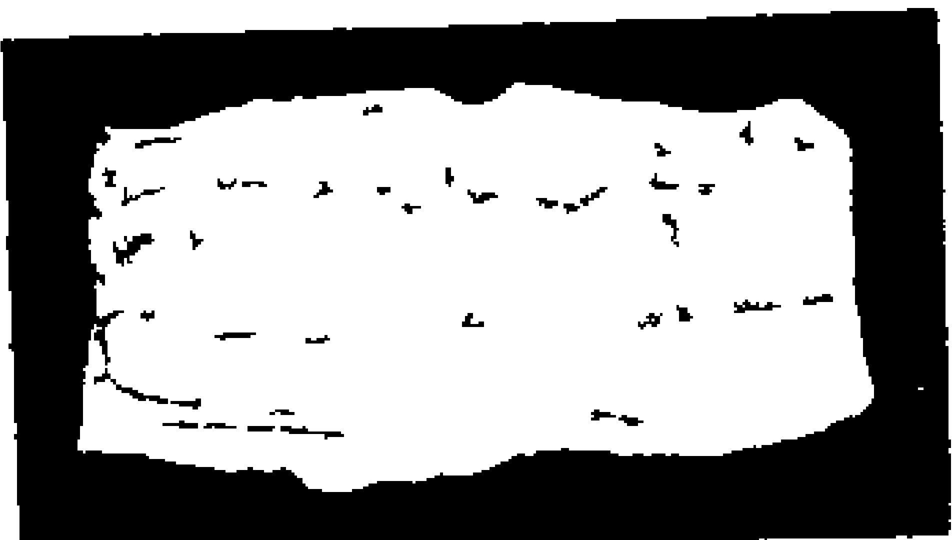


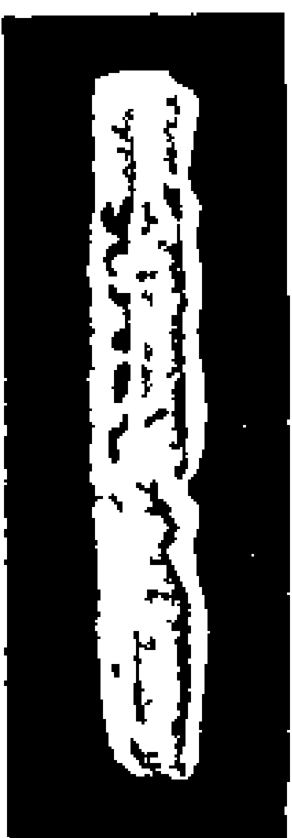


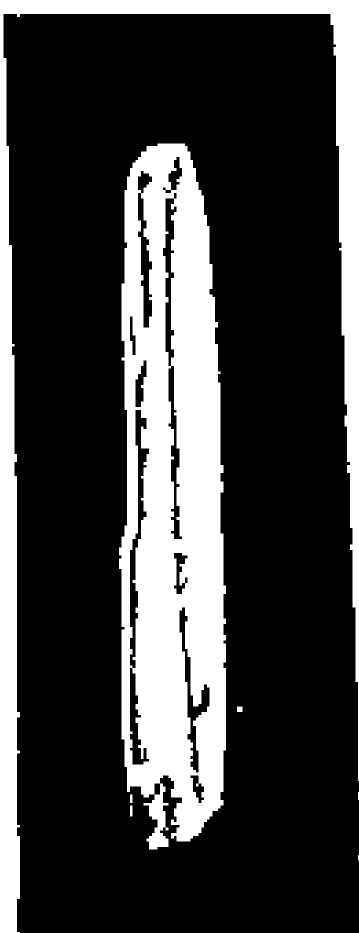


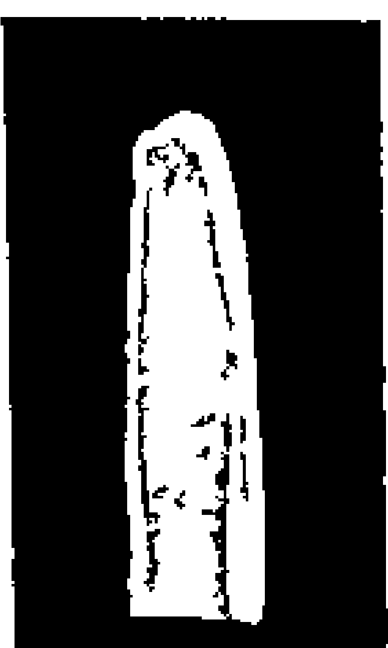




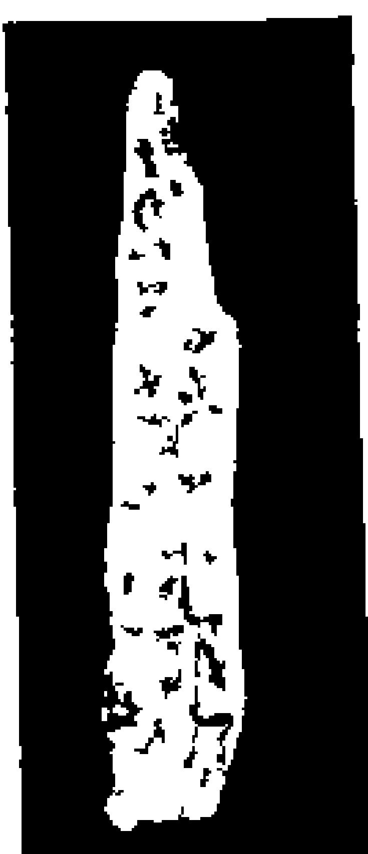



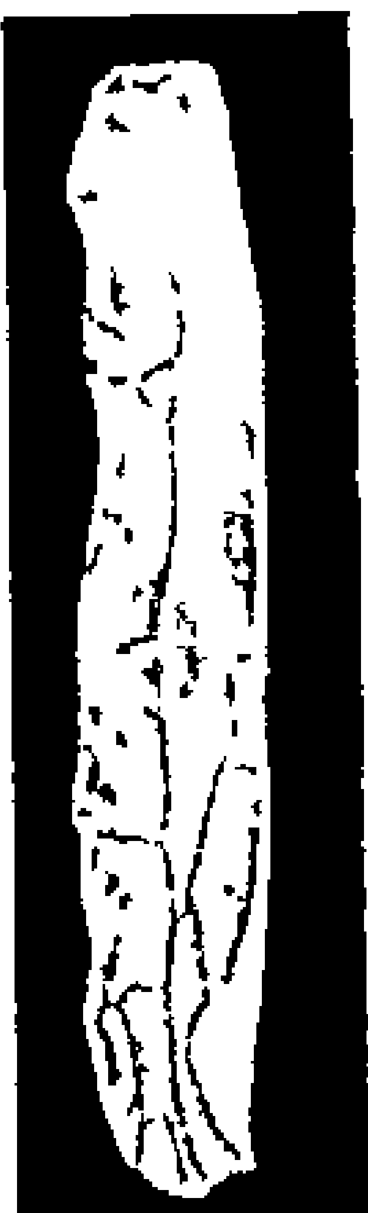






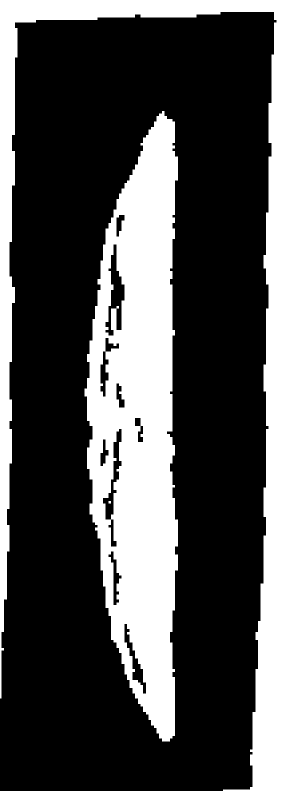


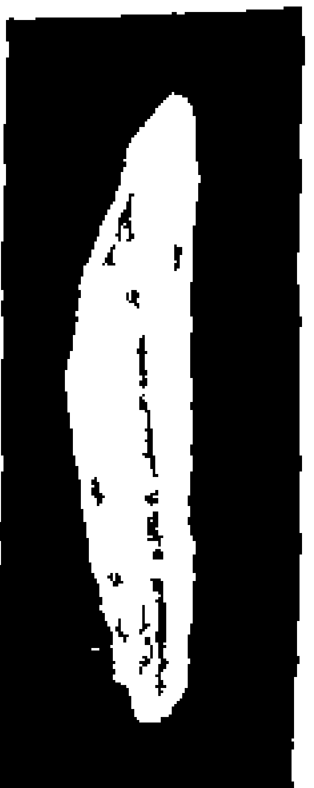




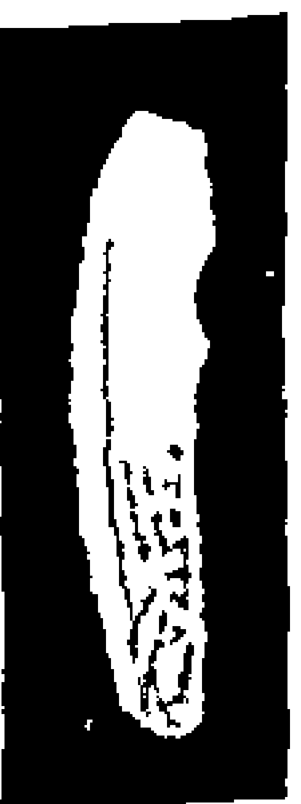
Microliths from Jorwe Cores, Blades and Flakes 1–16

(See pp. 151 53)



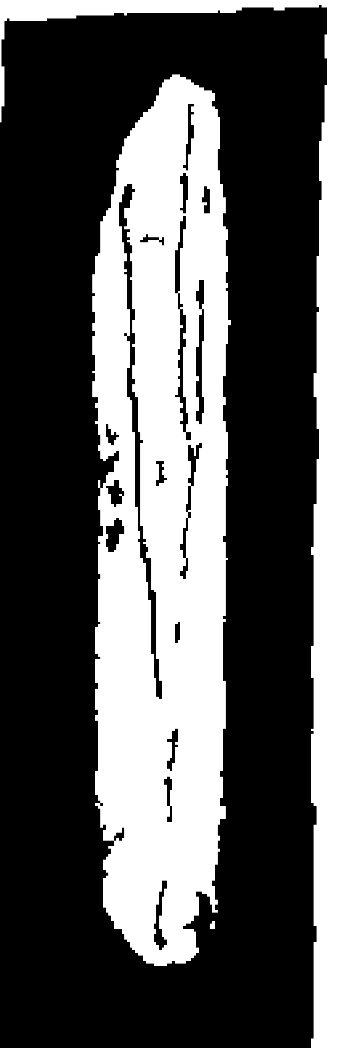






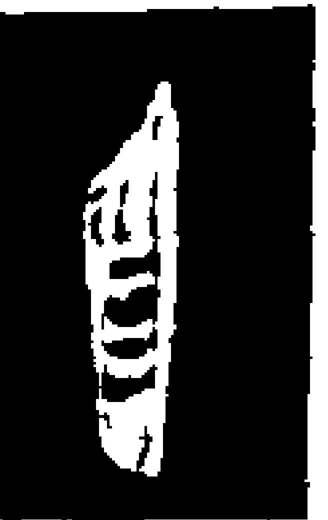


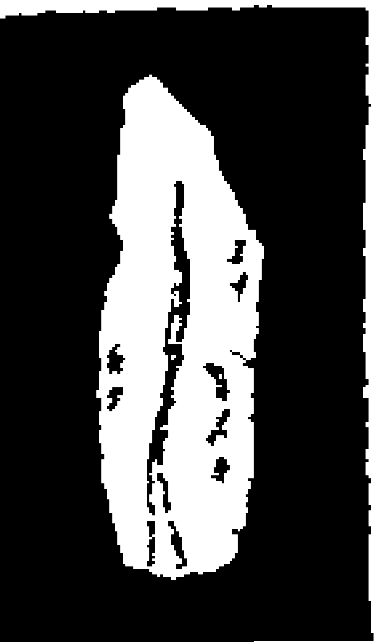


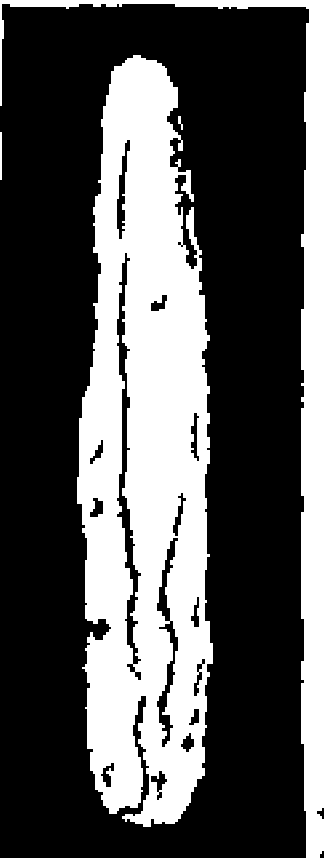




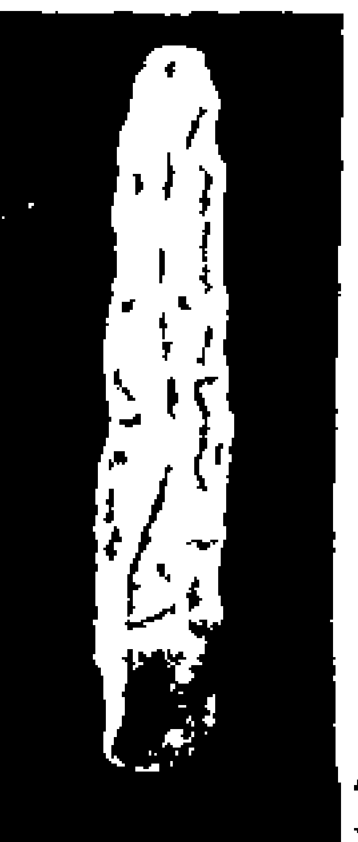


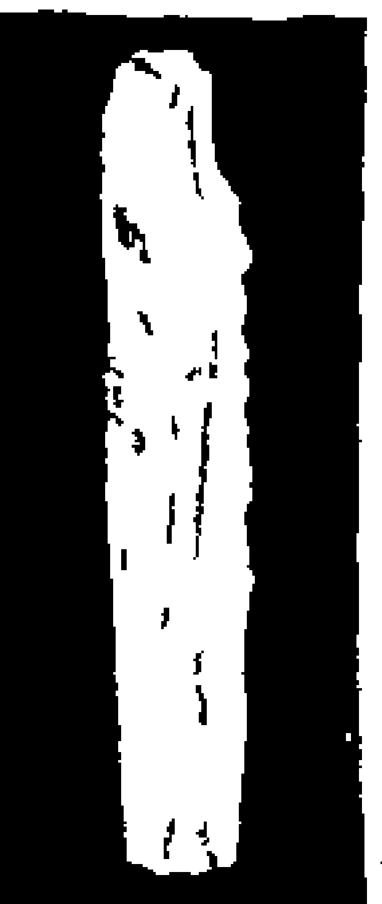












Microliths from Jorwe Crescents, Obliquely blunted worked back Blades and a Point (1–15)

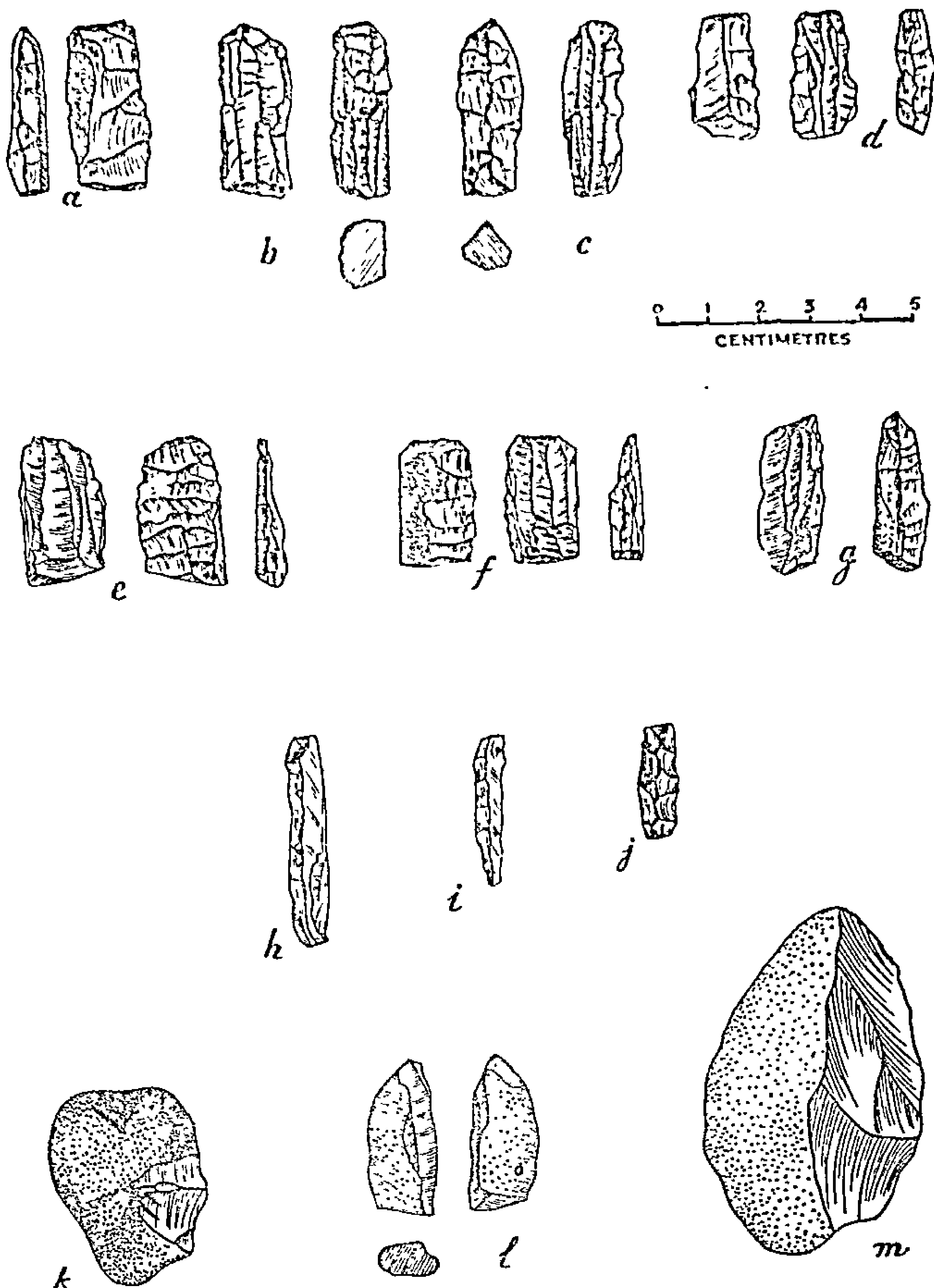


Fig 58 Microliths from Jorwe Cores, Scrapers and Flakes (a-m)
(See pp. 151-53)

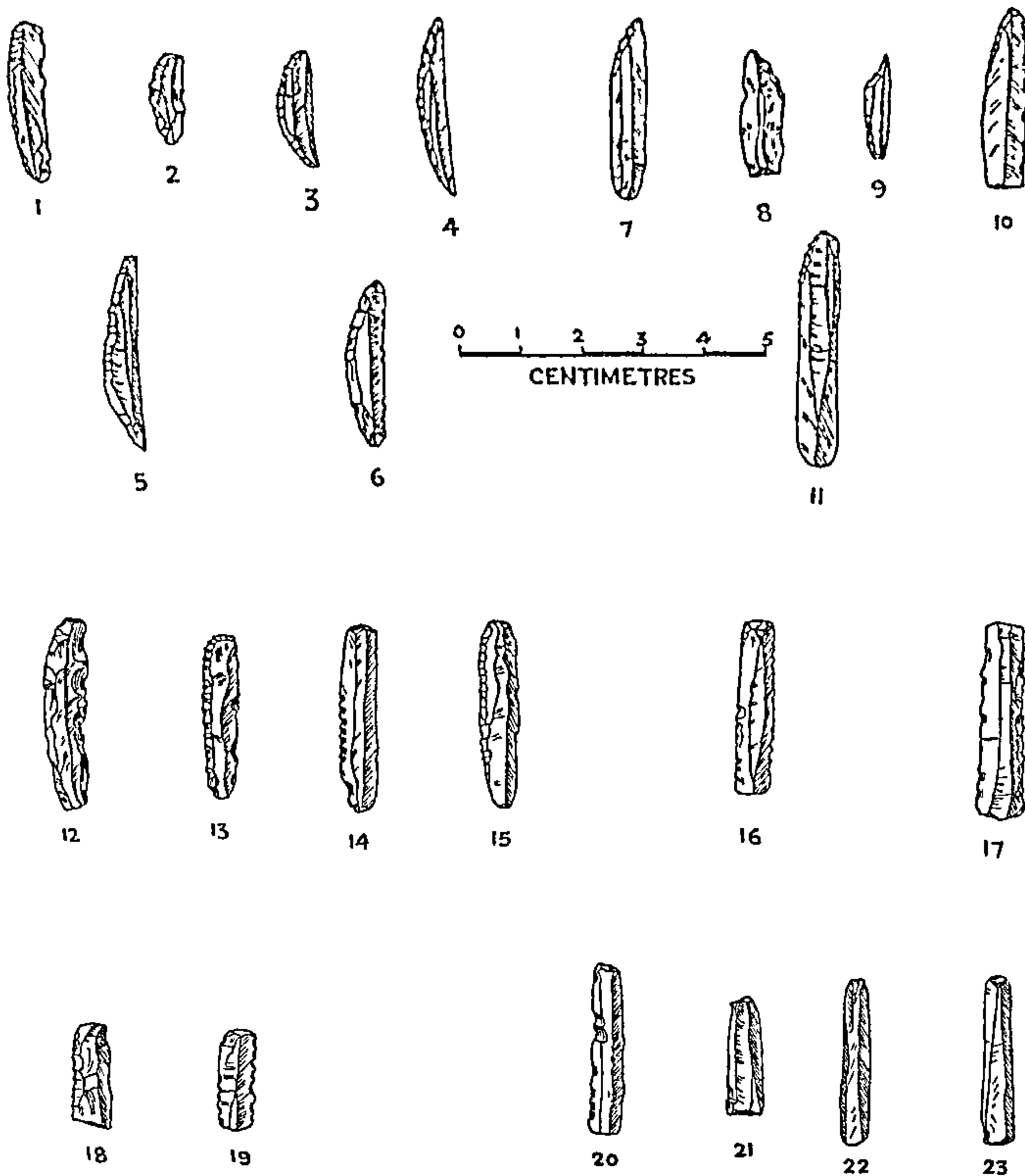


Fig 59 Microliths from Jorwe Blades and Flakes (1 23)
(*See pp 152 53*)

No 106, Jrw — It has an edge like No 241, 25 mm long, 19 mm broad, 14 mm thick (not illustrated)

iv Core, fluted on one surface, flattened on the reverse by delicate "ripple" or "serial" flaking Perhaps used or turned into a side scraper

No 69, Jrw — 29 mm long, 6 mm broad, 4 mm thick (Fig 58, e)

v Core, having one or two parallel flake scars only, the rest has cortex, section ovaloid

No 169a, Jrw — 32 mm long,[1] 9 mm broad, 5 mm thick (Fig 58, 1)

II *Flakes with crested ridge*

These are marked by cross flaking on both sides of the ridge or on one side only

No 63, Jrw — Flake with cross flaking on one side 44 mm long, 7 mm broad, 2 mm thick [Fig 58, h , pl XXXI, 16]

No 34, Jrw — Similar as No 63, but smaller 30 mm long, 5 mm broad, 2 mm thick [Fig 58, i , pl XXXI, 15]

No 64, Jrw — Flake with a mid ridge, cross flaked on either side 24 mm long, 14 mm broad, 4 mm thick [Fig 58, j , pl XXXI, 14]

III *Lunates or Crescents*

All these are invariably vertically retouched on the arc side, leaving the chord—the edge—untouched Nine specimens, of which 3 are intact, the rest have their tips broken

No 2, Jrw — Crescent blade 29 mm long, 4 mm broad, 2 mm thick (at its broadest and thickest points) [Fig 59, 4 pl XXXII, 1]

No 98, Jrw — Crescent blade 20 mm long, 5 mm broad 2 mm thick [Fig 59, 3 , pl XXXII, 3]

No 92, Jrw — Crescent blade, both ends broken 15 mm long 4 mm broad 2 mm thick (almost uniformly) [Fig 59, 2 , pl XXXII, 5]

No 31, Jrw — Crescent blade, one end broken the other rounded and not pointed 27 mm long 5 mm broad, 2 mm thick The back of the blade thins out at one end, so the retouch is only on half of the back The edge is uneven, probably because of use [Fig 59, 1 , pl XXXII, 4]

IV *Blades*

Obliquely rounded into a pointed end by retouch only on the oblique part This is either (a) on the left, or (b) on the right

(a) Five specimens, of which 4 are intact

No 150, Jrw — Obliquely blunted blade, 29 mm long, 6 mm broad, less than 1 mm thick Chalcedony, with carnelian tip [Fig 59, 7 , pl XXXII 9]

No 145, Jrw — Obliquely blunted blade, with a mid ridge, ends broken 28 mm long 8 mm broad, less than 2 mm thick [Fig 59, 10 , pl XXXII, 8]

(b) In these the obliquely retouched part is on the right hand side

No 195, Jrw — Obliquely blunted blade, 20 mm long, 6 mm broad, less than 2 mm thick [Fig 59, 8 , pl XXXII, 11]

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1. The almost identical length and breadth in many of these cores may be accidental, or due to the identical needs (technique)

V *Point on an obliquely retouched blade*

This type is almost analogous to Type IV The point is elongated and sharpened by a series of fine retouches on the oblique part Only one specimen

No 1061, Jrw — 17 mm long, 3 mm broad, 1 mm thick. [Fig 59, 9 , pl XXXII 10]

VI *Straight, worked back , one edged blade*

These resemble and should be proto types (as also Type IV) of the present knife blades These have a straight, unretouched, but at times used, edge, while the back is also straight, but vertically retouched, either all along, or only partly Nine specimens, of which 5 are intact, and 4 partly broken —

No 245, Jrw — Straight, worked back, one edged blade 34 mm long, 6 mm broad, less than 1 mm thick [Fig 59, 14 , pl XXXII, 15]

No 265, Jrw — Similar to No 245, with almost identical measurements Signs of use on edge [Fig 59, 15 , pl XXXII, 14]

No 182, Jrw — Similar to No 245 Edge very much used [Fig 59, 12 , pl XXXII, 13]

VII *Parallel sided two edged blades*

Two specimens Both are intact, and have both the edges finely retouched, and/or used

No 152, Jrw — Parallel sided, two edged blade 34 mm long, 8 mm broad, 2 mm thick [Fig 59, 17 , pl XXXI, 1]

No 1, Jrw — Parallel sided, two edged blade 32 mm long, 6 mm broad, 2 mm thick [Fig 59, 16 , pl XXXI, 2]

VIII *Saw like blades*

Two specimens

No 268, Jrw — Parallel sided blade, broken One edge has well marked retouch, which yields a saw like edge 19 mm long, 6 mm broad, 1 mm thick Opal [Fig 59, 18 , pl XXXI, 3]

No 128, Jrw — Parallel sided blade broken In this case the edge looks saw like because of use [Fig 58, 19 , pl XXXI, 4]

IX *Parallel sided flakes, without any retouch*

Three are intact and one broken

No 243, Jrw — It has however a used edge It is, therefore, possible that others, though not retouched, were also used 31 mm long, 5 mm broad less than 1 mm thick [Fig 59, 20 , pl XXXI, 10]

Nos 273 135 197, Jrw — Simple flakes [Fig 59, 21 23 pl XXXI, 11, 12 13]

X *Core scraper*

No 186, Jrw — Core scraper (?) on an elongated oval chalcedony nodule Edge on one lengthwise side by alternate flaking, the rest of the surface retains cortex 67 mm long, 44 mm broad, 34 mm thick [Fig 58, m]

No 105A, Jrw — Core scraper (?) on a small roundish patinated opal nodule (?) It appears as if the core was previously worked, as it shows scar like depressions, which have now acquired a glossy, smooth surface Later another flake was taken out on the edge side 40 mm long 32 mm broad 26 mm thick. [Fig 58, k , pl XXXI, 8]

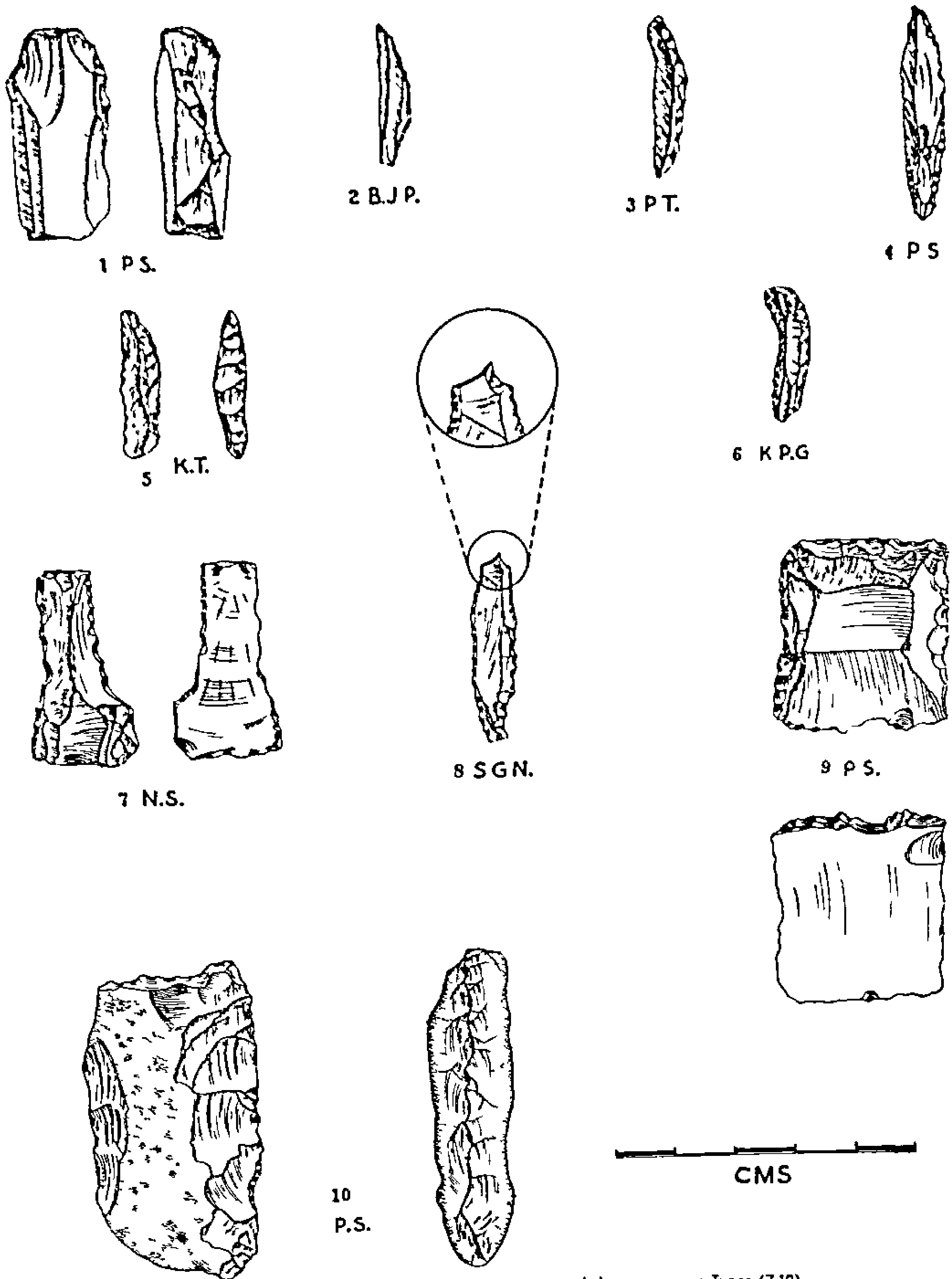


Fig 59a Microliths from other Godavari sites including some new Types (7 10)
(See p 156)

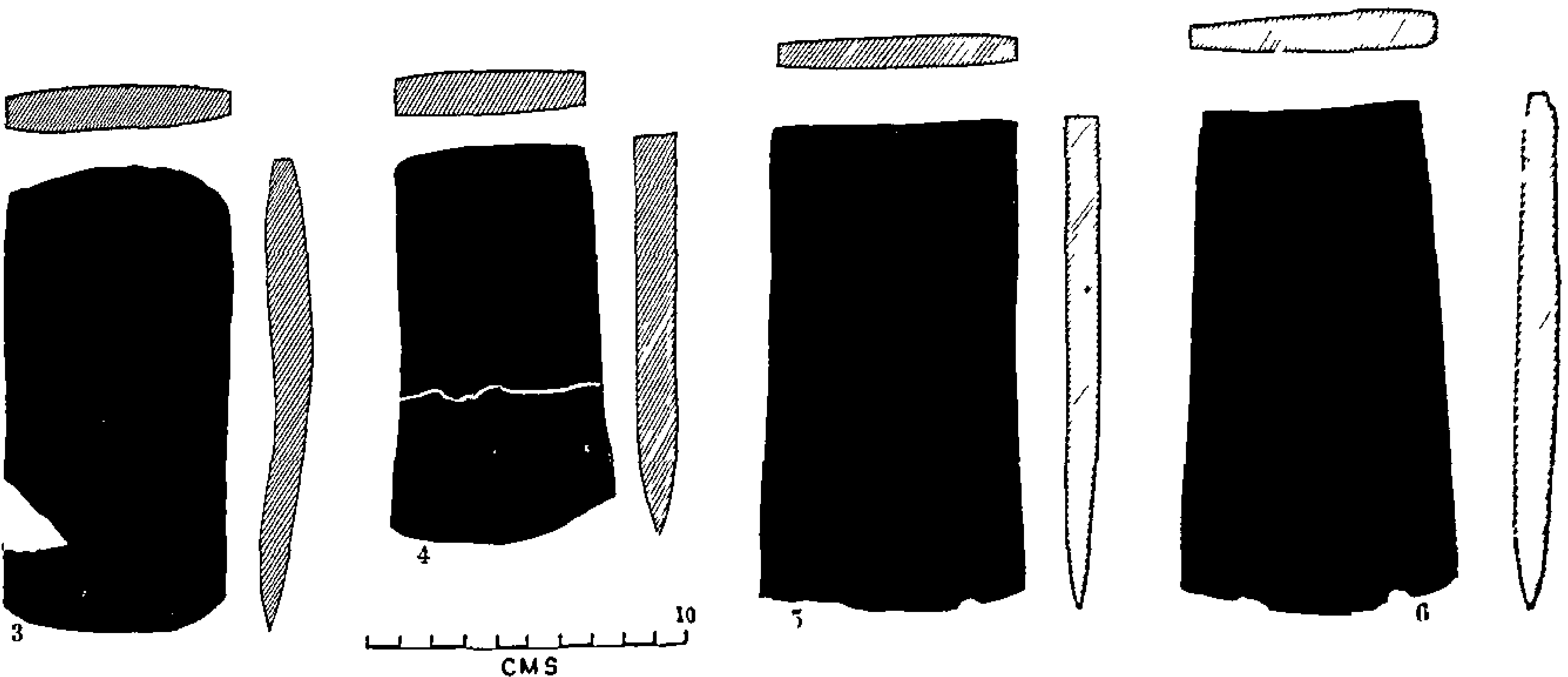
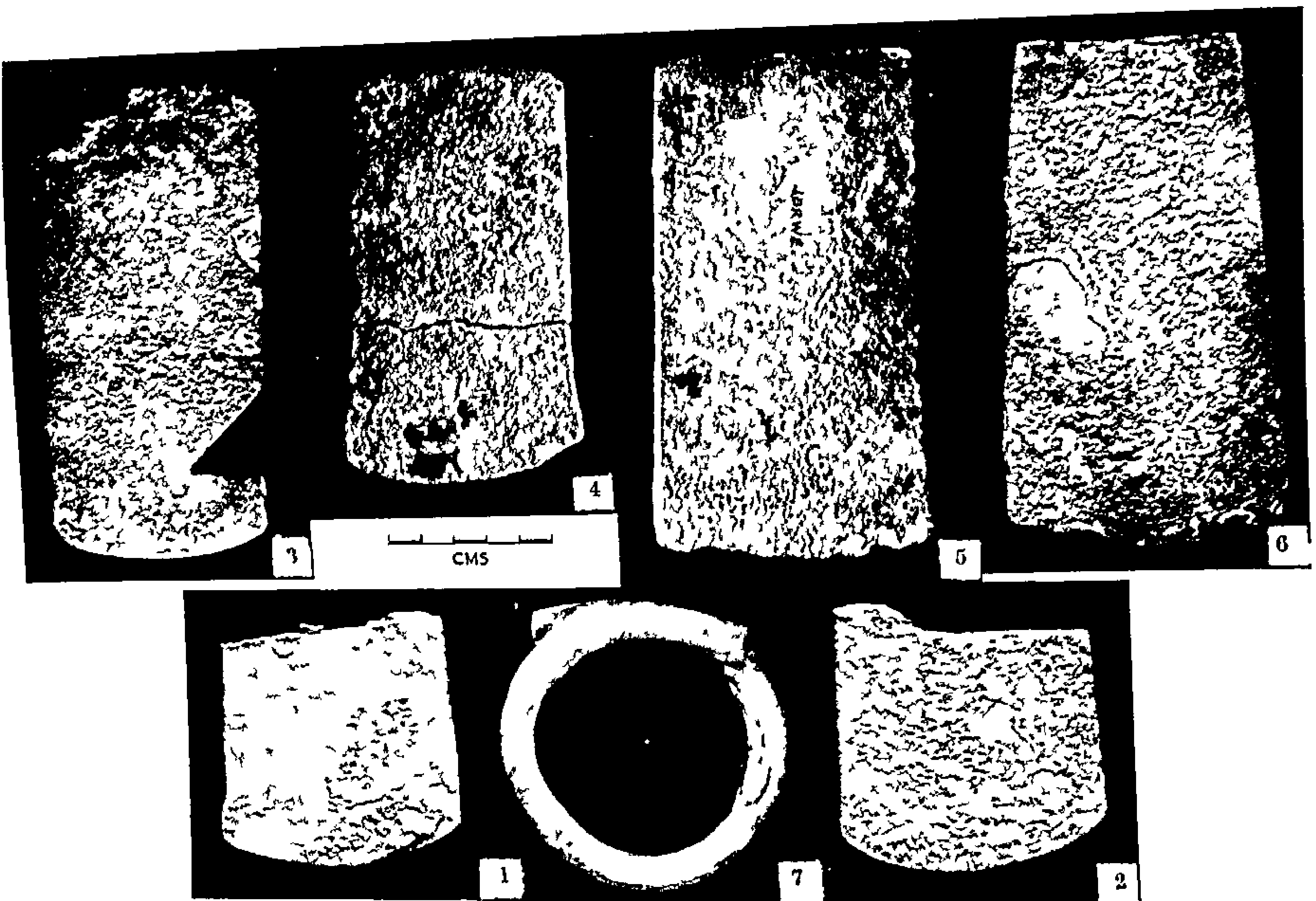


Fig 60 S x flat Bronze-axes f om Jo we (unst at f ed)

(*See p 157*)



Flat low g ade B onze axes and a Coppe bang e f om Jo we (unst at f ed)

(See pp 1 7 (0)

PLATE XXXVI



a (axe) x 45



Microscopic photo of the Bronze axe and the Copper bangle

(*See pp 158 51*)



b (bangle) x 110

APPENDIX I

Sites with Painted Pottery and Microliths of the Nasik-Jorwe Type in the Godavari Valley

(See Frontispiece)

This list was originally prepared with the information kindly supplied by Shri M N DESHPANDE Superintendent Archaeological Survey, Western Circle It has been brought uptodate, and the information checked and much amplified by a survey financed by the University of Poona Details of the survey will be published in a separate report in the University's Journal Here only a few important points are mentioned and some totally new types are illustrated

Nasik District		
Bhojāpur	On the right bank of the Mahalungi river beyond Nalvadi	Microliths and painted pottery
Dhoki	1½ mile south of Sinnar on the Sinnar Thāngaon road	Microliths painted pottery & pottery with graffiti
Ahmednagar District		
Ghargaon	On the Mula river about 15 miles south of Sangamner on the Poona Nasik Road	On the alluvial mounds north of the river chalcedony flakes are found which include some lunates
Jorwe	On the Pravara	Painted pottery & microliths
Kokamthan	On the bank of the Godavari about 4 miles south east of Kopargaon	Mainly chalcedony flakes with lunates and other blades in black soil A one period site No pottery was found
Kopargaon	On the bank of the Godavari	Hundreds of chalcedony flakes with painted pottery lie in black soil It seems to to be a one period site
Nevasa	The site known as La Mod	Painted pottery microliths and debris of later period
Pravara Sangam	By the side of the Inspection bungalow	Painted pottery and microliths
Sangamner	About a mile from the town on the Poona Nasik Road	The area known as Police ground consists of small brownish alluvial mounds These are strewn with flakes of chalcedony and other material besides a few blades
East Khandesh District		
Bahal	On the Girna River	Painted pottery and microliths This was excavated by Shri M. N DESHPANDE The sequence is more or less the same as at Nasik

Chāngdev	On the confluence of the Tāpi and the Girnā	Microliths
Pātan	At the foot of the hill to Pitalkhorā caves	Microliths
Hyderabad State		
Paithan	Further eastwards on the Godavari at present in the State of Hyderabad	Painted pottery & microliths in the black soil layer below the historic We did not find any painted pottery here

Some new types of microliths from other sites on the Godavari and its tributaries

[Fig 59 i]

No 1 Fluted core, roughly rectangular, having three parallel flake scars on *one side* face and an irregular edge marked by some deep bold scars on its opposite Dark brown chert 32 mm long, 16 mm broad 9 mm thick Pravara Sangam

No 2 Lunate blade steep delicate retouch on the back one end broken Chalcedony 22×4×1 mm Bhojapur

No 3 Lunate blade, thick back, marked by steep retouch from either side one end broken Banded agate 22×4×3 mm Paithan

No 4 Probably a point, having steep retouch on only half of the thicker part of the flake and partly on the other end Chalcedony 33×6×4 mm Pravara Sangam

No 5 Lunate blade as in No 3, one end broken Chalcedony 22×8×4 mm Kokamthan

No 6 Curved, hook like, thick flake, having steep retouch on the back, and also on the partly hollowed edge *A distinctly new type* Chalcedony 21×5×3 mm Kopargaon

No 7 Probably part —butt end—, of a long large, thick, arrowhead or dagger like weapon, which had—as now extant—a shouldered tang, characterized by fine, steep retouch The broken wider end of the blade seems to have been used as a scraper Fine, glossy, milky, Chalcedony 32×17 & 10×5 mm Nevasa

No 8 A point on a thick flake, having a tang which is partly broken The thicker, vertical side, as well as a part of the sloping front and the sides of the tang are retouched The sharp projecting point is intentionally made by removing a flake from either side Chalcedony 30×7×2 mm Sangamner

No 9 Rectangular scraper on a thick flake having a perfectly flat—without bulb—undersides and a stepped top which is also flat and unworked Except one, however the three of its sides are beautifully retouched either with the intention of having edges on them or blunting them for use whereas the fourth is not re touched from the top, but presents an uneven edge because of retouch from the underside Smoky Chalcedony 32×26×9 mm Pravara Sangam

No 10 Side scraper on a thick rectangular nodule The edge is made by bold alternate flaking whereas the back is partly flaked for a suitable finger hold The rest of the surface retains the uneven cortex Smoky Chalcedony 55×28×13 mm Pravara Sangam

VI

Bronze Axes and Copper Bangle

In all six axes were found. [pl. XXXIII, 1-5, 7 and Fig. 60]. Four of these (Nos. 1-2, 3, 6) are in the Deccan College collection, and the rest (Nos. 4-5) are in the collection of the Department of Archaeology, Western Circle, Baroda. It is due to their courtesy that they are published here.

The weights and measurements of the axes are as follows :—

No.	Weight in ounces.	Length mm.	Breadth mm.	Thickness mm.
1	11.8	69 (broken)	73	12
2	13.0	66 "	75	12
3	26.2	142	72	13
4	21.9	143	78	10
5	25.3	120	66 (ancient break)	13
6	23.3	144	71	9

Excepting axes Nos. 1 and 2 which are almost broken in half, others do not differ much in size or in weight. All the axes may be described as flat with a section biconvex at the edge, nearly so towards the butt, but comparatively thick in the middle. The ends are thus tapering but more towards the edge than those at the butt. The sides are straight, but slightly narrower in Nos. 4 and 6. The edge is almost convex, in all cases, but in No. 6 looks less so, because it is uneven due to use. There are two large concavities in the edge of No. 6. The butt-end in No. 3 has one corner rounded, while in No. 5 it is perfectly straight and nearly so in No. 6.

All the axes when found were covered with a fine, thin, green patina.

At the instance of my former colleague Dr. M. G. Dikshit, Messrs. B. R. Pathak and M. K. Medhekar of the Engineering College, Poona, kindly examined axe No. 3. Microscopic examination and chemical analysis of this piece and the bangle showed that the axe was cast from molten metal.[1] It has 1.78% of tin and 98.04% of copper. They, therefore, conclude that the axe is a low grade alloy of bronze. Though the outside surface is slightly oxidized and has a thin greenish patina, the freshly cut surface is reddish yellow.

1. Their report is given in the Appendix II.

Nowhere except in the Indus and Baluchistan sites,[1] have copper axes been found in a stratified context. A study[2] of those hitherto recorded indicates that "those outside the Indus area are thick sectioned, with a narrow butt, and a wide blade, while those from the Indus sites have nearly parallel sides and a thinner section."

If we compare the Jorwe axes with those from these two main groups, all would compare more favourably with the Indus type, except Jorwe No. 6, though the average thickness of their section is at least 2 mm. more than that of the axes in the Indus group. Even in axe No. 6, the sides are only slightly narrow, but not so narrow as in the Chanhu-daro specimen,[3] and the edge is not flaring. Even at Mohenjo-daro[4] and Harappa,[5] there are instances, where the edges are flaring, and sides slightly indented.

From the extra-Indus Indian sites, the specimens with which the Jorwe axes may be compared are from the U.P. sites, particularly those from the districts of Bijnor, Mainpuri, Bithur, Shahjahanpur, and Pondi in Rewa District (Vindhya Pradesh) published by Vincent SMITH,[6] Hiranand SASTRI[7] and LAL.[8] In many of these axes, the sides are nearly parallel, and the edges convex or crescentic, though in section they might be thicker.

Copper Bangle

There is nothing particular to report about the copper bangle. It is of pure copper, and ring-like in shape.

From the limited nature of the evidence noted above, it seems that it is difficult to draw more definite conclusions regarding the age of the various copper axes merely on the basis of typology. For the present it may be said that the Jorwe axes belong to a proto-historic phase, on which more light is likely to be shed by the evidence of pottery.

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1. GORDON, D. H. "The Early use of Metals in India and Pakistan" *JRAI.*, Vol. LXXX (1950), p. 61.

2. *Ibid.*

3. MACKAY, Ernest, *Chanhudaro Excavations*, 1935-36 (1943), pls. LXX, 30, LXXVI, 4.

4. MARSHALL, John, *Mohenjo-Daro and Indus Civilization*, pls. CXXXIX, 4, CXXXVIII, 3.

5. VATS, Madho Sarup, *Excavations at Harappa*, Vol. II, pl. CXXIII.

6. SMITH, Vincent, *IA.* XXXIV (1905), p. 232.

7. SASTRI, Hiranand, *JASB.* XI (1915), pls. I-V, pp. 1-6.

8. LAL, B. B., "Further Copper Hoards from the Gangetic Basin, etc." *Anc. Ind.*, No. 7 (1951), pp. 20-38.

The bangle, as the chemical analysis tells us, is of pure copper. It is of a simple type, nearly round with overlapping ends, made out of a solid cylindrical rod, 12 mm in diameter and 32 2 mm. long The inside diameter of the bangle is 59 mm. (pl. XXXIII, 6)

APPENDIX II

Report on Copper Celt and Bangle

by

Shri B. R PATHAK and Shri M. K. MEDHEKAR,
College of Engineering, Poona

Two copper pieces were sent to this Laboratory by the Deccan College Post-Graduate Research Institute, Poona, for metallurgical examination

The results of microscopic, chemical and physical examination of these pieces are given below:

(A) *Copper Axe*

(*a*) Shape—the piece as received in this laboratory was a broken piece from the axe, broken along A A[1]

(*b*) Fracture—The fracture along A A[1] was irregular and indicated that the piece may be a cast specimen

(*c*) Colour—The outer surface was slightly oxidised The freshly cut surface of the piece for metallographic examination was a reddish yellow, like that of low alloy bronzes This was further confirmed when drillings were taken for the chemical analysis

(*d*) Microscopic Examination—One sample was examined as such and the other after annealing at 700° C for 3 hours

(i) Original piece As seen from the photomicrograph (1) the structure is dendritic confirming the observation under (b) that the axe was cast from molten metal Under high magnification the dendrites showed cored structure Some dark particles and a pale blue constituent were also seen under high magnification The dark particles are presumably oxide particles and the pale blue ones are slag particles

(ii) Annealed piece After annealing for 3 hours at 700° C the dendritic structure had completely disappeared giving place to polygonal structure containing a large number of twinned crystals

(*e*) Hardness and Grain size

As cast 77 5 D P H

Annealed 52 9 D P H

Grain size of annealed piece—0 065 mm dia A S T.M. Standard

(*f*) Chemical Analysis—Qualitative tests showed that tin was present in the sample The quantitative determination of tin on a 0 5 gm sample by the gravimetric method gave a tin content of 1 78%

Copper was determined volumetrically by the iodine method and gave a Copper content of 98 10%

It is intended to confirm these results by spectro scopic analysis at a later date when the presence of traces of other elements will also be investigated

(*g*) Conclusion—The material of the axe is a cast low tin bronze It is doubtful that the addition of the 1 78% of tin was intentional The tin is more likely to have entered during the smelting of the ore This tin content, however, must have lowered the melting point of copper by about 10° C Another very interesting thing was noted during the microscopic examination of the original piece Very small twinned crystals were near the surface of the narrowed section, although the structure at the centre was dendritic The presence of these twins can only be explained by very slow annealing during these years of the heaviest worked portion of the axe The appearance of twinned crystals in the annealed piece confirms that the axe was first cast and then worked to the required size and shape

(*B*) *The Copper Bangle*

(*a*) Shape—The bangle is made from a rod of approximately circular cross section 5/16" diameter and 7 " long The inside diameter of the bangle is 2¼"

(*b*) Fracture—The newly cut surface of the bangle was bright red, typical of pure copper

(*c*) Colour—The outer surface was somewhat oxidised The drillings were bright red

(*d*) Microscopic Examination—The structure was not changed by annealing at 700° C for 3 hours and is shown in photomicrograph (2) The grains were polygonal showing a large number of twinned crystals Under high magnification, dark as well as pale blue particles were also seen in this sample like those in the axe specimen

(*e*) Hardness and Grain size

Original	60 3	D P H
Annealed	60 2	D P H

Grain size—0 065 mm dia A S T M Standard

(*f*) Chemical Analysis—Qualitative testing gave no indication of tin or any other constituent The Copper content as determined by the volumetric method was 99 0 %

(*g*) Conclusion—The bangle has been made from a cast rod which has been reduced to the necessary length and diameter The twinned crystals in the original piece indicate that annealing has taken place It is not possible to say if this was intentional or otherwise Even if the annealing was intentional it is doubtful if the basic principles involved were understood Another possibility that annealing is due to prolonged burial cannot also be overruled

VII

Pottery[1]

The main bulk of the pottery-collection from Jorwe consists of sherds—mostly shoulder pieces—too fragmentary to indicate the shapes

1 This section is prepared by Dr A V Naik a former Research Assistant in the Department

that were employed in the various classes of the Jorwe ware However, there are many rim-fragments, about a score of spouts, some lid-pieces and a few nearly complete pots, on the strength of which, it is possible to indicate to some extent the range of pottery-types in vogue in those days

General Features

Barring a few very large storage jars, very small pots and lamps and dishes which are hand-made, the pottery is wheel made Moreover the remarkable evenness of wall-thickness and the fine, regular, concentric striations between bold, parallel ridges on the inside surface, noticed in the case of a large majority of pottery-pieces, appear to indicate general use of the fast wheel

Though most of the sherds and rim-pieces are tough and give a high metallic ring, it is found that the control of firing, except in the case of small and medium sized bowls and thin walled vessels, was imperfect The degree of heat applied in firing or its duration was insufficient to effect an even change in the colour of the clay, and even failed, in a number of cases, to penetrate into the core of the wall Consequently many sherds show laminated structure in the fracture and a difference of colour in the thickness of the body In these, the core has retained the natural colour of the clay and is flanked by one or more external layers on either side which, being better burnt than the core, are of light to dark shades of red brown or tan Subject to this, therefore the pottery may be said to be well baked generally and, in not a small number of cases, where complete fusion of the clay particles has occurred and partial vitrification has taken place, hard baked or even over-baked

Clays

An examination of the core colours revealed that at least three different kinds of clay were used—red brown, grey, and black—which under conditions of thorough oxidization burnt red These clays appear to be alluvial[1] and have a natural admixture of fine sand and, therefore require little or no tampering material Indeed, except in the case of very thick ware vessels, no trace of any use of tamper is found While all the three kinds of clay were used in the manufacture of thin pots and pots of medium thickness, in the production of thick ware, generally the black clay was preferred The natural colour of the latter was perhaps further

1 The Jorwe pottery is being scientifically examined so these inferences should be regarded as tentative (H D S).

enhanced by mixing with it some carbonizing organic substance such as cow-dung or charcoal as some examples show traces of carbonized material. Sherds of thin ware constitute a major portion of the present collection. Does this phenomenon suggest that there was a general predilection for thin ware ? Whatever the case was, the clay of this pottery appears to have been selected with greater care and a special paste, very close in texture, prepared with the result that the pot-walls are decidedly thinner.

Nearly all the pottery of Jorwe is made of local clay, its three kinds being available in abundance in the vicinity of Jorwe and in the middle and western parts of the northern half of the Ahmednagar District. This tract of land lies in the valley of the Pravara between two parallel spurs of the Sahyadris and is traversed by nearly a dozen tributaries of the Pravara. The soil along the banks of these rivers—particularly those of the Pravara—is extremely rich and clayey and resolves itself in three varieties: *Kāli* or black, *tāmbat* or red, and *barad* or grey, all noted for their more or less ferruginous character. In such favourable condition Jorwe appears to have developed as a centre of the potter's craft, in remote times.

Shapes

The great majority of the vases of Jorwe have rounded bases. About half a dozen examples of the flat-base were also noticed from which it appears that only lamp-dishes, some pans and basins and larger storage jars had flat bases. Generally, the rounded-base was treated carefully along with the upper portion of the pot, but the flat base was neglected and left rough

Technique

The method commonly used in shaping was that of modelling and the pots were made in one piece. But there are instances which suggest that recourse was frequently taken to the 'building' method as well. Many fragments of bowls and globular vessels have broken along the neck—or—shoulder-line or at the carination. This perhaps indicates that they were 'built' in two or more pieces. At any rate, the acutely carinated pots were certainly shaped by modelling and building in conjunction. Not a single instance suggesting the use of the moulding or coiling methods was noticed.

Slips

Slips are fairly common and a large percentage of pottery is covered with a slip on both sides Totally unslipped instances are few, but the very

thin, slip-like layer noticed in some cases and regarded as slipped may be the result of the smoothing process and not an applied slip In a number of cases only the exterior surface is endowed with a slip Very often a thin wash of a darker shade or of a different colour appears to have been applied on the exterior slip to form the background of the painted design The slips are generally well-levigated, fine in texture and rich in adhesion Where they are gritty, they contain particles of lime and shining grains, perhaps of quartz Whether thick or thin, the slips and washes were, as indicated by the fine, parallel, concentric lines, applied with fine-haired, flat brushes or smoothed with them, while the pot was wet and rotating on the wheel The application is skilful, as the surfaces are generally uniform and show no pits or crevices The exterior surfaces, after they were slipped, were smoothed so that all the striations were obliterated The use of the burnisher is very little indicated in the case of thin and medium ware, as the surfaces of these sherds are matt The thick black and tan slipped ware has, however, mostly burnished surfaces The slips are of two main colours—red and black—and show various shades of the former in combination with yellow and brown

Decoration

The occurrence in the collection of the plain and decorated pot-sherds in large quantities, perhaps indicates the simultaneous prevalence of both the kinds of ware As a matter of fact a comparison between the sherds of corresponding thicknesses from the two groups shows that except for the decoration, they are alike in their composition fabric and slip The decoration is either painted, stamped or incised, and in a few cases, cut It is interesting to see that painted decoration is restricted only to the ware whose thickness is below 15 mm , while it is generally the ware of greater thickness that is decorated with stamped or incised ornament This scheme appears to have arisen out of consideration for the capacity of the pot wall to withstand the thrust of the stamping or incising instrument This seems to be borne out by another phenomenon, noticed above, that while the surfaces of the thick ware are burnished, the ware of lesser thickness has almost invariably matt surfaces Polish is totally out of the picture

Painting

The painted design was applied on smooth, matt surface and the colour used is black The painting is, without exception, monochromatic and was generally disposed in horizontal panels running round the neck ,

shoulder, belly or corresponding parts of the pot The space covered by the painting never extends beyond the centre of the pot or the carination ridge of the bowl Pots painted over the whole exterior are totally absent, whereas interior decoration other than the rim band occurs on extremely few examples

Designs

The painted designs show a strong bias towards linear and geometric patterns, though a few fragmentary examples indicate the presence of some plant and floral designs Animal—including human—designs are conspicuous by their absence The employment of horizontal bands of one or more simple painted lines of varying thickness emphasizing one or more members such as lip, neck, shoulder or belly [See Types 1, 6, 7, 9, 10, 12, 13, 14, 16, 17, 19, 21, 22, 24] or as terminal or inter mediate borders [See Types 4, 5, 6, 9, 12, 13, 15, 17, 18, 19, 20, 21, 22, 23—30 etc] is most common Equally common, especially on bowls, is the simple pattern formed by connecting long horizontal line bands with closely grouped verticals or diagonals [See Types 5, 9, 12, 13, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25—30, 32, 33 etc] The use of straight or curved diagonals or oblique brush strokes and broad vertical line bands as space fillers [See Fig 79, 1, 2, 3, 4, 7, 8, 10, 11 , Fig 82, 4] also appears to have been a much respected convention The zig zag pattern between horizontal line bands appears to have been a favourite design for the decoration of shouldered, globular vessels [See Fig 79] The wavy line and the zig zag make frequent appearance both as horizontal and vertical space fillers [See Fig 79, 5 , Fig 81, 4 5, 11 , Fig 80, 12 , Fig 81, 8, 9 etc] Other designs comprise festoons [See Fig 83, 1 and 2] the lattice or the criss cross pattern [See Fig 79, 9 and 11] horizontal bands of connected, cross-hatched or solid rhomboids or lozenges [Fig 80, 5 to 12 , Fig 82, 11], cross hatched triangles [Fig 83, 5] and squares [Fig 82, 15] Special mention must be made of the design formed by a combination of the horizontal line band, the loop or the zig zag pattern and oblique or vertical strokes occurring mostly on shouldered vessels This design though made up of linear motifs, gives the impression of a dense growth of grass and, therefore, called ' grass pattern—[Fig 82, 3 6]—very likely possesses some symbolic value connected with the plant world There are also a few miscellaneous designs, among which some suggest floral and leaf patterns [Fig 82, 12 13 , Fig 83, 9] The other kind of decoration occurring mostly on thick ware pots consists of deeply incised criss cross lines

[Fig. 85, 4-5], relieved concentric rings or ridges with pierced holes along the slopes, [Fig. 84, 1, 2, 3], notches [See Types 68, 75, 77, 78], gauge-marks [See Type 84], pinched lip [See Type 81] and stamped finger-tip and finger-nail impressions [See Types 67, 69, 70, 83, 86, 87, 71, 76, 80, 92, 88, 72, and Fig. 85, 86, 87, 88]

Classification

Since the collection was later mixed up, it is not possible now to study it layerwise or statistically. Therefore, it is classified, for the sake of convenience, into three broad groups, viz. (a) Painted Pottery, (b) Decorated Pottery, and (c) Plain Pottery, and the range of pottery-types is indicated in the following pages through them. In determining the pottery-types, not only the shape and the characteristic structural features of the pot, but the size, thickness of the wall, the kind of clay and the slip have also been taken into consideration

Types

Jorwe pottery is predominantly utilitarian and comprises a very small range of types In the class of painted pottery the carinated bowl with rounded base is the most common type The carination is generally medium, but acute and blunt forms also occur Most frequent are the bowls with concave profiled upper portion i e body above the carination Next in frequency are bowls with inturned sides Bowls with flaring sides and bowls with almost perpendicular or vertical sides (though showing concave profile) also occur in appreciable quantity The other common type seems to be the shouldered, globular jar with short, tapering or concave neck, though no complete example of it is available The funnel-necked, wide-mouthed carinated vessel furnished with a funnel-spout also appears to be equally common in this class of pottery Other painted types are cups shallow dishes, small basins, wide-mouthed water vessels and lids

The remaining two classes, viz decorated and unpainted pottery, have many types in common, such as —Bowls of convex and vertical profiles, convex and tapering sided basins, carinated cooking vessels and large, concave and tapering necked—shouldered—jars Attention may also be drawn here to the large, rimless bowl with a funnel-spout [Type 50], the lid-cum-dish [Type 108], the tiered pot or ring stand [Type 109], (see also the ring stand [Type 110]), which are rare and unique types in this collection A few sherds of painted saucers or dishes, too fragmentary

to indicate the size and shape, have also been noticed. The collection also contains some fragments of solid knob-handled lids [Fig. 78].

Finally a reference must be made to the few examples of painted and scratched potter's marks found on bowls and carinated jars.

The description of pottery types, selected sherds and other pot-members follows the scheme mentioned below :—

(a) Painted Pottery (Types 1 to 66), [Figs. 61-69].
(b) Decorated Pottery (Types 67 to 89), [Figs. 70-73].
(c) Plain Pottery (Types 90 to 127), [Figs. 74-77]
(d) Painted Sherds [Figs. 79-83].
(e) Decorated Sherds [Figs. 84-85].
(f) Spouts and Lid Handles [Fig. 78]

PAINTED POTTERY

[The specimens described below are wheel-made and hard-baked, unless otherwise stated]

FIG. 61 AND PL XXXIV

These illustrate painted vessels—funnel spouted and necked pots, bowls with carinated shoulders and comparatively tall and narrow mouthed globular vessels—which were found prior to regular excavations In the latter were found only sherds illustrating these shapes and fabrics (types 12 51 and 54) The vessel [Fig 61, 2] is with the Archaeological Department, Western Circle, Baroda No 4 (pl XXXIV) is a potter's mark found on a stratified sherd

FIG 62 (TYPES 1-10)

Type 1 (Jrw 3283) is a thick walled (cup ?) with a thickened, rounded and slightly out turned rim Tan or brick ware of medium fabric covered with a gritty red slip both inside and out [1] Both the surfaces are rough and matt The inner edge of the rim is painted with a broad black band

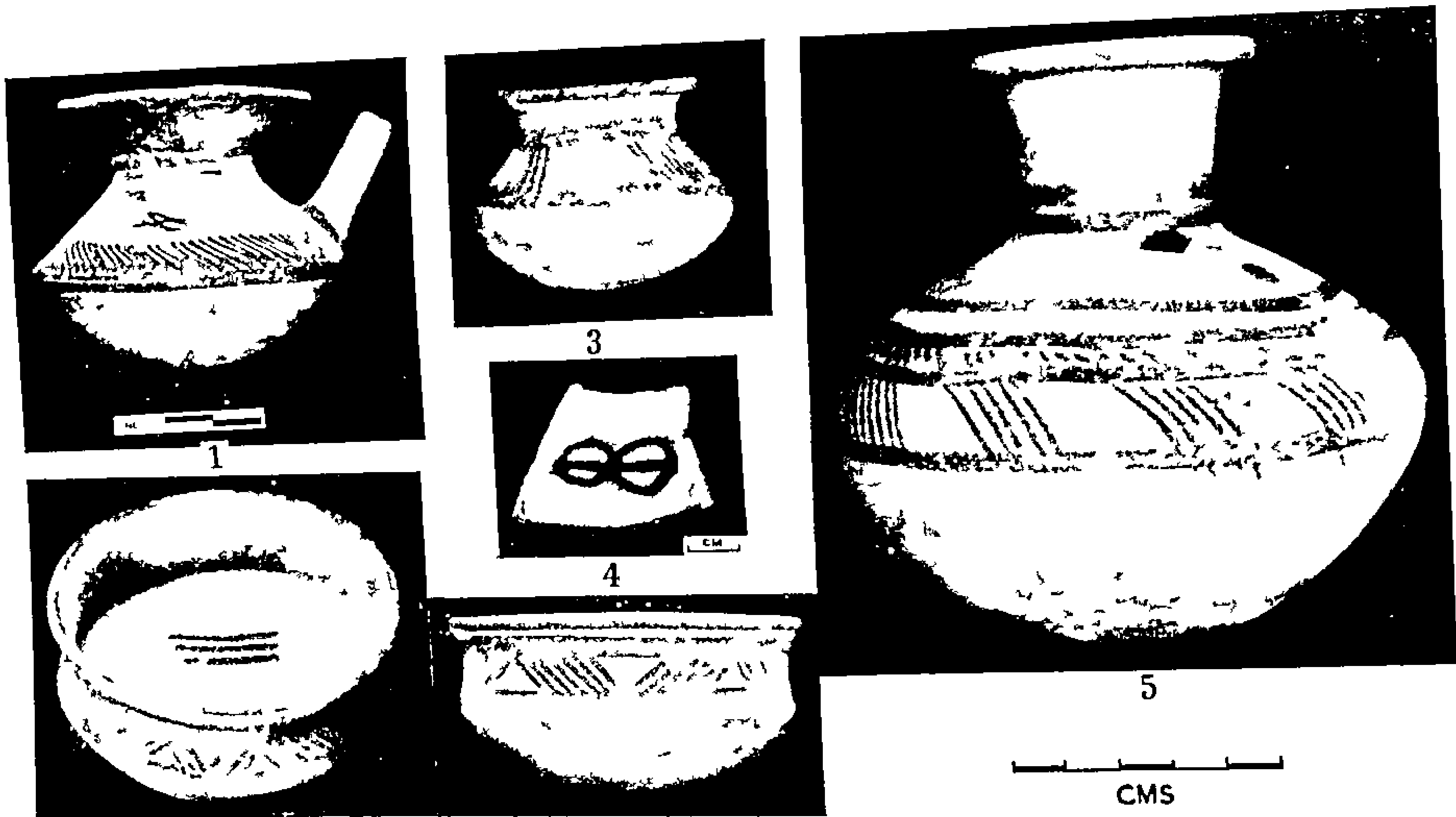
Type 2 (Jrw 3270) is a plain rimless *cup* of medium grained brick ware, medium fabric, well levigated dark red slip

Type 3 (Jrw 2/3155) is a *cup* or a deep *bowl* with its wall slightly corrugated and tapering upward Fine grained light grey ware, medium fabric treated with a red slip Black band round the belly

Type 4 (Jrw 2/2491) is a deep *boul* with a slightly out turned and internally rounded rim and two grooves on the exterior just below the rim The wall has an internal bulge a little below the rim and then it gradually thins upto an incised line on the inside of the belly Medium grained brick ware, gritty red slip Decorated on the exterior burnished surface with groups of vertical lines within a broad horizontal zone running round the pot and bordered by black bands

1 The slip is generally on both the surfaces, so henceforth the details will be omitted from the description

PLATE XXXIV



Comp ete P t d Potte y vessels f om Jo wa (Unst a f ed) No 4 Potte s ma k on a she d (Strat f ed)

(See 7 1)

PLATE XXXV

1

CMS



3



2

Grey ware vessels (Stratified) and No 3 a double Pot (Unstratified)

(See pp 173 176)

Type 5 (Jrw. 1/165) is a small *bowl* with flaring sides, thinned at the edges Light tan ware of medium fabric, orange coloured slip Both the surfaces are matt and rough Black band along the inside of the rim at the edge and three vertical brush strokes, perhaps from the outer edge of the rim terminating at a thin horizontal band slightly below the fullest bulge of the belly on the exterior Handmade

Type 6 (Jrw 3221) is a thick walled *dish* with inturned sides and a sagger base Fine grained light tan ware of medium fabric, pink red slip A simple pattern formed by opposite groups of oblique lines or diagonals joining horizontal lines

Type 7 (Jrw 2/3137) is a thin walled *dish* having flaring sides, with a broad shallow groove below the rim on the exterior Medium grained tan ware covered with a well levigated red slip Traces of black bands remain on the edge of the rim and at the middle of the wall on the outside

Type 8 (Jrw 1170) is a thick walled *dish* having flaring sides, with a slightly convex profile Its upward thinning wall terminates with a rounded edge Fine grained, tan burning grey ware covered with a thin red slip on the outside only A wavy line running horizontally round a little above the mid line

Type 9 (Jrw 1/160) is a *basin* having a slightly convex or curvilinear profile and a thick voluted and beaked rim Coarse grained brick ware of medium fabric covered with a thick dark red slip Both the surfaces are rough and matt A broad band on the voluted portion of the rim and broad oblique bands painted on the inside surface

Type 10 (Jrw 2/3204) is a shallow *basin* with bulging sides and an externally beaded rim Fine grained light grey ware, well levigated red slip Two horizontal bands—one just below the rim and the other round the line of the bulge

Fig 63 (*Types 11 23 Bowls*)

Type 11 (Jrw 1/10) is a *basin* of bulging profile with a rolled and undercut rim Fine grained tan burning brown ware, well levigated tan slip The exterior shows traces of burnishing

Type 12 This and the rest—though varying in size and design are best illustrated by a complete unstratified specimen

Thin or generally thick walled bowls having concave profile, rounded base, slightly flaring mouth, thickened rim with bevelled, or rounded edges Fine grained tan ware, well levigated, dark red, yellow, slip on both surfaces which are matt The essential shape rarely varies, but the slips and designs differ These are mentioned below

Type 12a (Jrw 1774) is thin walled small *bowl* of concave profile, red slip on both surfaces which are matt The design on the exterior formed by groups of diagonals joining a broad band below the rim and a thin line at the carination the rim emphasised by a black band [See Fig 65, pl XXXIV, 2]

Type 13 (Jrw 937) *Bowl* having rounded edge and dark red gritty slip The design formed by a broad horizontal band overlapping slightly the interior of the rim, a thin line running round the upper slope of the carination ridge and groups of slanting and vertical brush strokes joining the two on the exterior, a band also round the lower slope of the carination ridge

Type 14 (Jrw 1163) is a thin walled *bowl*, yellowish red slip The rim emphasised by an overlapping band, a wavy line forming acute angles round the middle of the body.

Type 15 (Jrw 1095) *Bowl* with rounded rim having a groove, dark red slip The painted pattern is similar to that on Type 12a but here a plain horizontal zone intervenes between the rim and the design

Type 16 (Jrw 1008) *Bowl* with rim having slightly sharpened edge Dark red slip containing shining particles of quartz on both surfaces The rim emphasised by an overlapping band and the concave surface decorated with groups of oblique strokes and wavy lines in the metopes

Type 17 (Jrw 1502) *Bowl* with a rim having a sharpened edge Pink slip on both surfaces A band running round the inside of the rim and opposite groups of oblique strokes between the edge of the rim and perhaps the carination rim

Type 18 (Jrw 1099) *Bowl* having rounded base very thin, slightly everted rim Dark red slip Design similar to that of Type 12

Type 19 (Jrw 2563) *Bowl* having very thin rounded base Dark red slip The rim emphasised by an overlapping band while the exterior is decorated with a pattern formed by two horizontal bands joined by groups of thin diagonals

Type 20 (2 Jrw 1/2) *Bowl* Red slip both inside and outside The exterior surface burnished and decorated with a running series of opposite groups of slanting lines joining horizontal bands

Type 21 (Jrw 1062) *Bowl* Fine grained light tan ware well levigated purple slip The rim emphasised with a band running round the outside and below it is the pattern formed by groups of closely drawn oblique lines joining a broad horizontal band and a thin line along the carination ridge

Type 22 (Jrw 1700) Thin walled *bowl* with almost vertical side and flaring mouth and having an out turned and beaked rim Russet coloured slip containing particles of quartz The rim emphasised with a band and the exterior surface is filled in with opposite groups of slanting lines joining the rim band with the thick line at the carination ridge

Type 23 (Jrw 833) *Bowl* with a flaring mouth and simple rounded rim having a shallow groove round the interior below the rim Medium grained slate grey ware Fine russet coloured slip Broad band overlapping the inside of the rim a thin line running round the carination ridge and opposite groups of diagonals joining the two

FIG 64 (*Types 24 32*)

Type 24 (Jrw 2/3140) *Bowl* with rounded rim distinguished by two sharp ridges—one outside and the other a little below the edge on the inside A thin russet coloured slip Cf Type 15

Type 25 (Jrw 1115) Externally beaded rim Red slip Cf Type 24 above

Type 26 (Jrw 2/3133) Red slip Cf Type 23

Type 27 (Jrw 801) Thick red slip The decoration of the rim and the exterior are similar to that of Type 19 but here a broad plain zone intervenes between the band below the rim and the pattern

Type 28 (Jrw 1231) is a vertical sided *bowl* with an out turned beaded rim

Type 29 (represented by Jrw 2626) is a vertical sided *bowl* with a beaded rim

Type 30 (Jrw 2/3182) is a thick walled vertical sided *bowl* with a slightly out turned thickened and rounded rim Medium grained brick ware Perhaps without any slip inside and out There is a broad band on the interior running round below the edge of the rim and the exterior bears the usual pattern similar to that of Type 29

Type 31 (Jrw 1174) Well levigated pink red slip Decorated with a horizontal band and what appears to be a wavy line The rim is painted with a band overlapping both the sides

Type 32 (Jrw 3236) *Bowl* Thin russet coloured slip The exterior is painted with the design consisting of opposite groups of slanting lines joining horizontal bands while the rim is decorated with a band overlapping both sides

Fig 65 (*Types 33 to 36a*)

Type 33 (Jrw 3112) *Bowl* Dark red slip Cf Type 19

Type 34 (Jrw 2866) Similar to Types 19 and 33 (Jrw 2563 and 3112) described above with slanting lines to the right Perhaps the 'Ladder' scratched on the interior surface is the potter s mark

Type 35 (Jrw 2801) *Bowl* Well levigated orange coloured slip A black band along the top of the rim otherwise plain

Type 36 (Jrw 2/3136) *Bowl* Red or rather amber coloured slip The exterior perhaps burnished and bears two parallel horizontal bands just above the carination and a thin band painted along the inside of the rim

Type 36a Unstratified but complete *bowl* with empty triangles alternating with oblique lines probably as in Type 44 described below with three thick horizontal potter s (?) mark inside

Fig 66 (*Types 37 46*)

Type 37 (Jrw 3293) is a small thin walled acutely carinated shallow *bowl* with a tapered and flanged rim Chocolate slip inside and a buff wash outside and on both sides of the rim Overlapping rim band and diagonal cross hatching between two parallel horizontal bands covering the whole exterior from the carination ridge upto the base of the rim.

Type 38 (Jrw 3245) *Bowl* Comparatively thin walled well levigated dark red slip Closely drawn opposite groups of thin diagonals joining broad parallel horizontal bands on the exterior The rim and the carination ridge also emphasised with overlapping bands painted on them

Type 39 (Jrw 2/3-02) is a thick walled *bowl* with slightly flaring rim and bulging body Thin red slip A thin line along the upper edge of the rim and remains of vertical strokes

Type 40 (Jrw 2549) Comparatively thin walled and straight sided Dark red slip Cf Type 21

Type 41 (represented by Jrw 929) is a thin walled *bowl* Grey brown ware of extra fine fabric Well levigated red brown slip Cf Type 15

Type 42 (Jrw 3293) *Bowl* with orange coloured slip Two black bands—one along the inside of the rim and the other on the exterior along the carination ridge extant

Type 43 (Jrw 1/217) *Bowl* Comparatively thin walled Fine yellow red brown slip Black band inside the rim the exterior bears groups of slightly curved and slanting lines placed one opposite the other

Type 44 (Jrw 2/3240) *Bowl* with red slip Cf Type 21 (Jrw 1062) and the complete Type 36a described above

Type 45 (Jrw 1060) *Bowl* The inside of the rim bears a broad band and the exterior is decorated with opposite groups of thin slanting lines joining two bands parallel and horizontal—one along the carination ridge and the other just below the rim

Type 46 (Jrw 1721) *Bowl* Grey ware Yellowish red slip Cf Type 14 (Jrw 1163)

Fig 67 (*Types 47 49*)

Type 47 (Jrw 1173) *Bowl* Purple red slip Broad overlapping band on the rim and a pattern formed by slanting border a thinner band of unequal thickness covering the whole of the exterior from the rim to the carination ridge

Type 48 (Jrw 817) *Bowl* Russet coloured slip Broad overlapping band on the rim and slightly slanting brush strokes—which become broader near the base—joining the rim band with perhaps the band at the carination ridge

Type 49 (Jrw 1130) *Bowl* Red slip Cf Type 21

Fig 68 (*Types 50 51*)

Type 50 (Jrw 1/129) Large thick walled rimless *bowl* furnished with a funnel spout which forms an acute angle with the side of the bowl It is of coarse grained brick ware of medium fabric and is coated with a thick well levigated red slip both inside and out The spout is tubular ovaloid in section The painting which is quite carelessly done consists of a broad band on the upper side of the spout continued on the wall exterior of the bowl upto the lip from which point two thin bands run downward in the exterior and terminate perhaps at the centre of the bottom The lip is painted with an overlapping band *A unique type at Jorwe*

Type 51 (Jrw 1/332) is perhaps a deep thick walled *bowl* with inward slanting side and an everted tapered rim Yellowish red slip Besides the overlapping rim band, the exterior decoration perhaps consisted of a horizontal series of double bordered triangles or a double wavy pattern

Fig 69 (*Types 52 66*)

Type 52 (Jrw 2668) Deep *bowl* with a flaring and externally grooved rim Pink slip Nature of design uncertain

Type 53 (Jrw 1096) Fragment of a thick walled vessel with a narrow neck having flaring rim Dark red slip Overlapping band on the rim

Type 54 (Jrw 1/112) Thick walled concave neck of a vessel having an out turned and externally squared rim with grooves on the under surface Medium grained brown ware Tan slip Horizontal band and lines at the rim and the neck line

Type 55 (Jrw 1068) Thin walled vessel with a comparatively broad high neck with an externally projecting thickened and squared rim Fine grained tan ware Red slip Broad band on both the surfaces of the rim

Type 56 (Jrw 789) Almost identical in shape to Type 55 with two horizontal bands at the neck

Type 57 (Jrw 2468) Almost similar to Type 56 but of rather coarse grained tan ware Red slip on the outside only The inner surface is perhaps only smoothed Two horizontal bands on the exterior at the neck

Type 58 (Jrw 1104) Very thin walled vessel with broad neck having an out turned thickened and externally squared rim Light tan ware Pink red slip Two horizontal bands at the neck

Type 59 (Jrw 1348) Perhaps an ellipsoid *jar* with a short angular neck Fine grained slate brown ware Dark red slip The neck shoulder junction emphasised by a narrow, horizontal band of short slanting strokes between two thin bands Neck blackened at some parts due to inverted firing

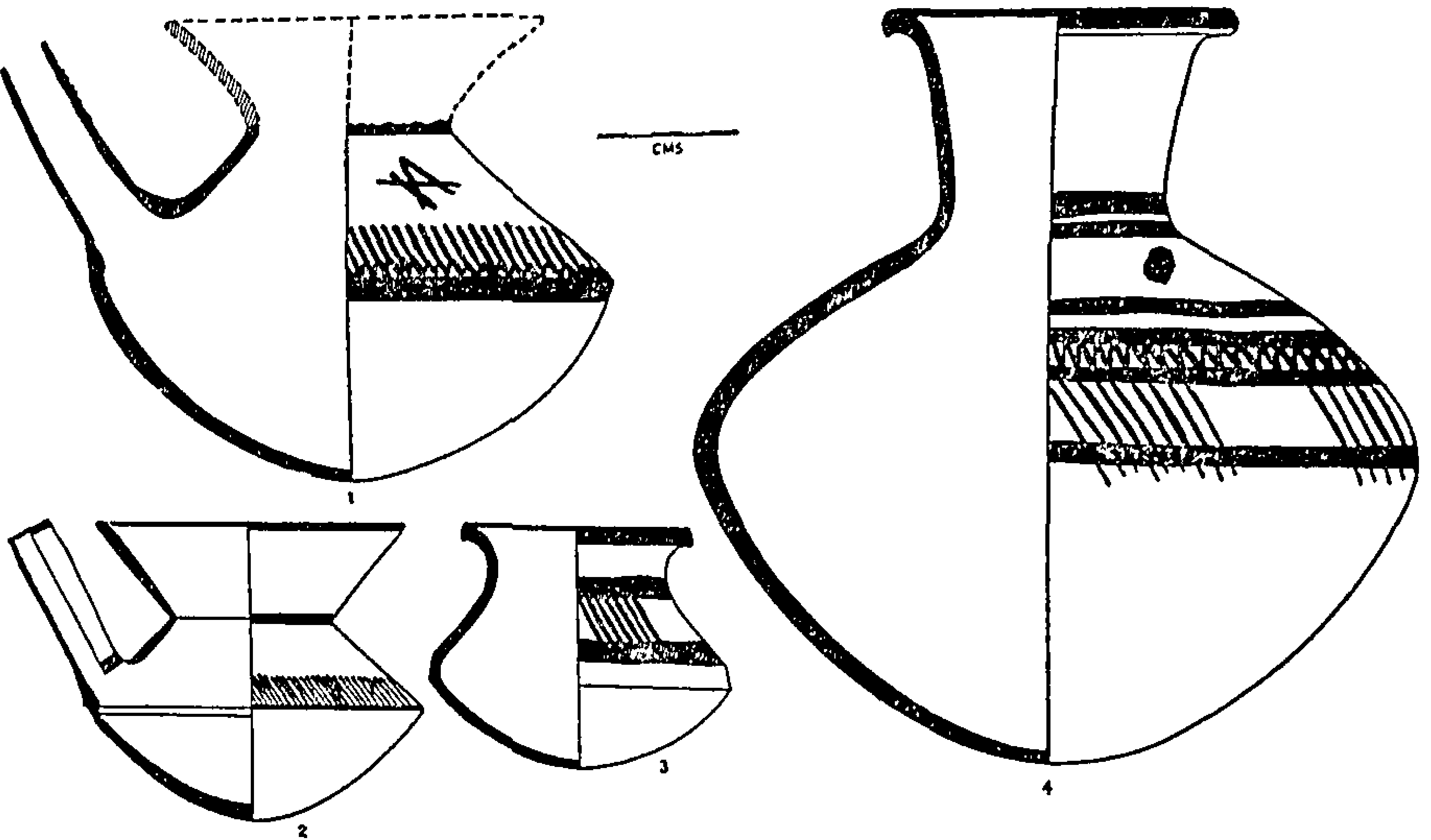


Fig 61 Complete Painted Pottery vessels from Jorwe (Unstratified) 1 2 Spouted 3 4 Short necked
(See p 100)

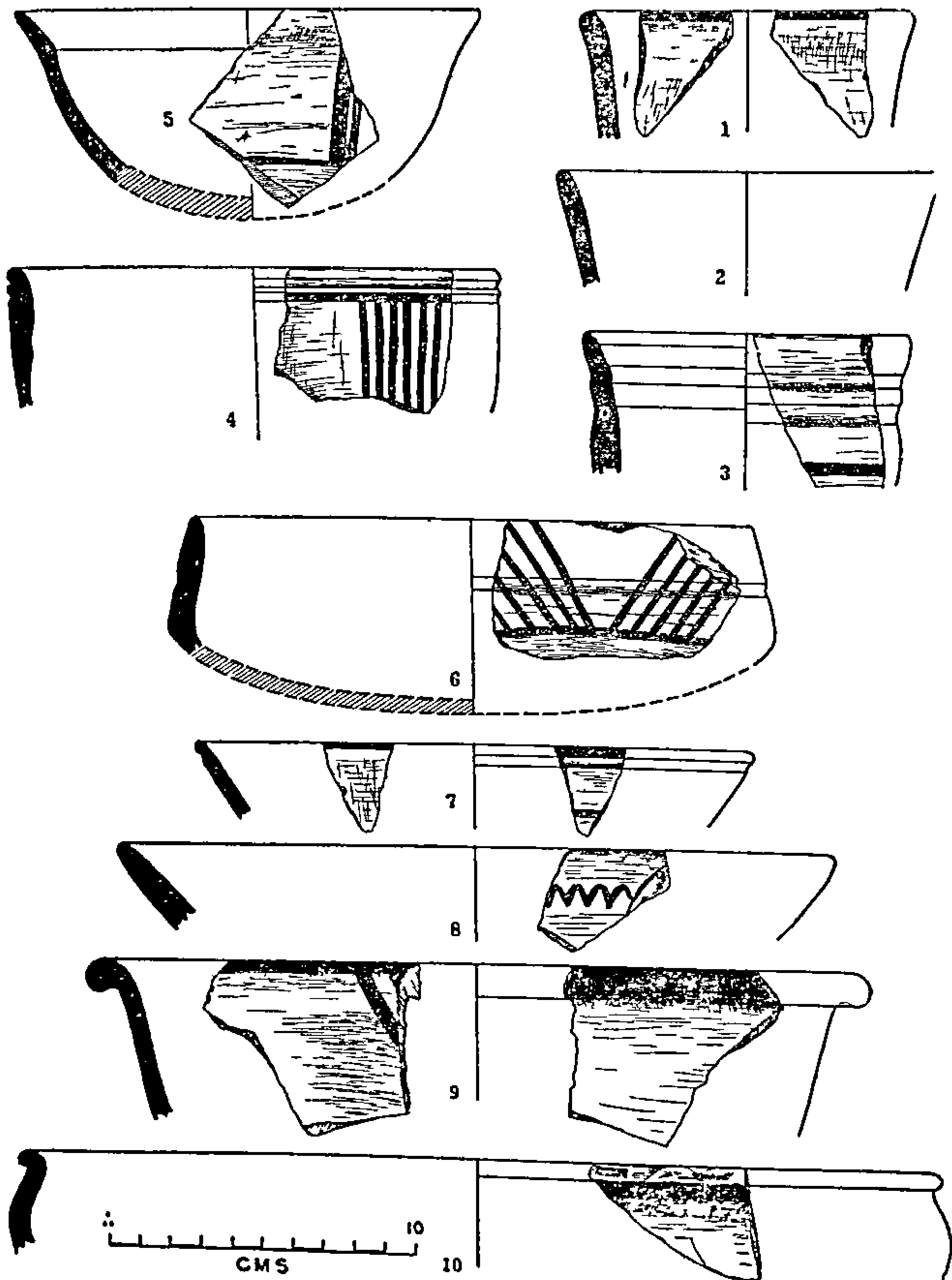


Fig 62 Types 1-10
(See pp 160-67)

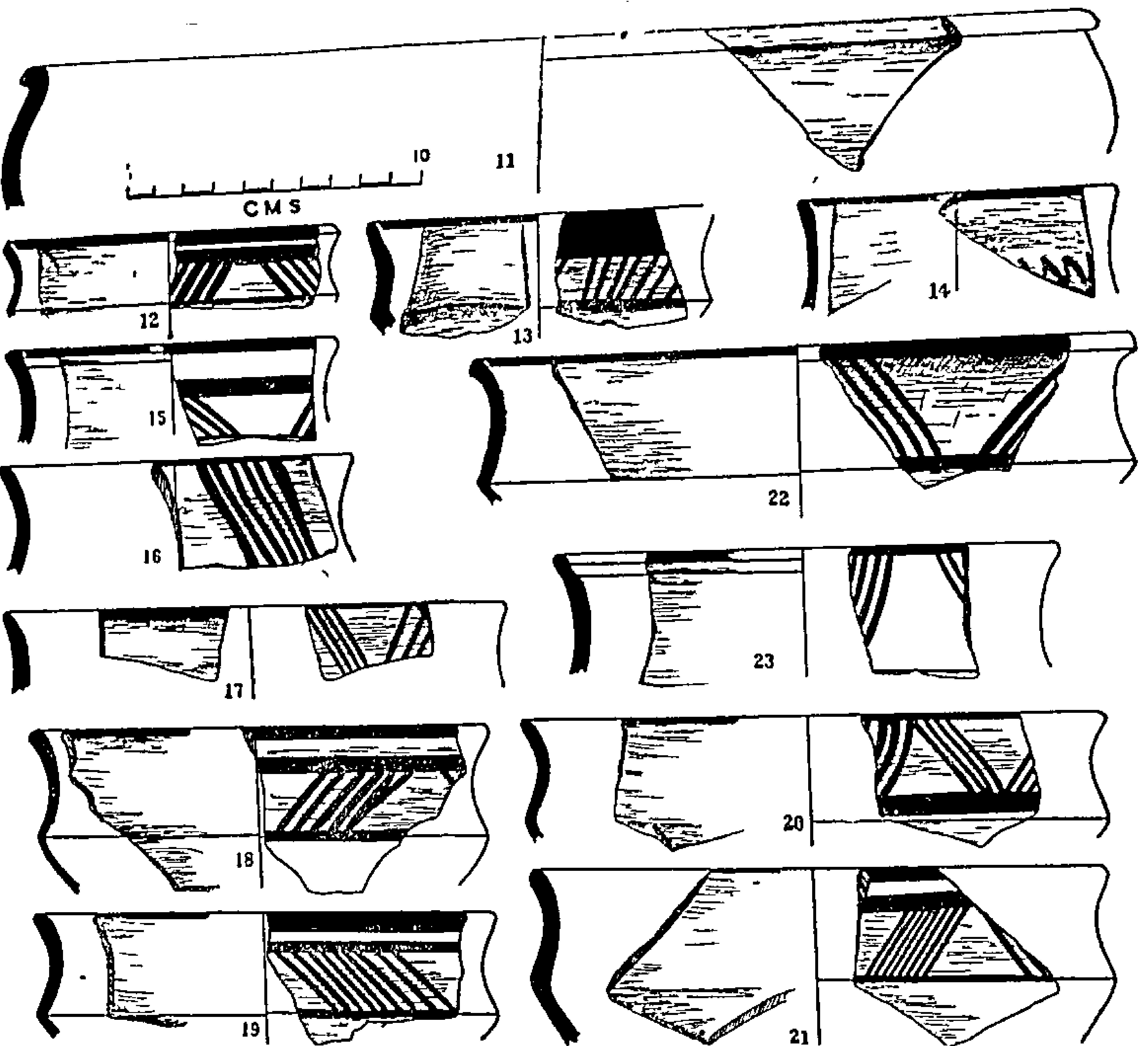


Fig 63 Types 11 23
(See pp 167 68)

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Fig 64 Types 24-32

(See pp. 168-69)

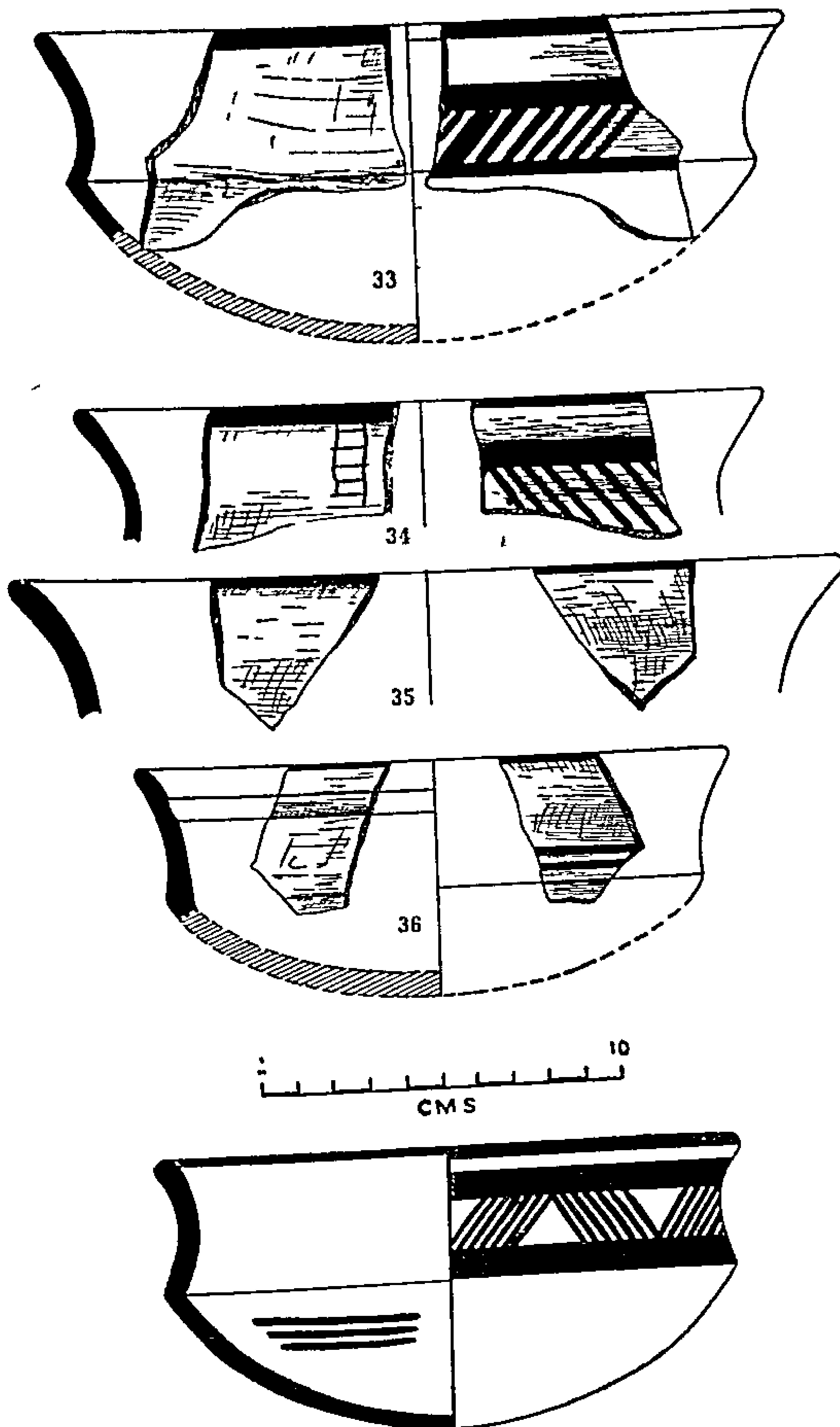


Fig 65 Types 33-36 and a complete Carinated Bowl (36a)

(See p 169)

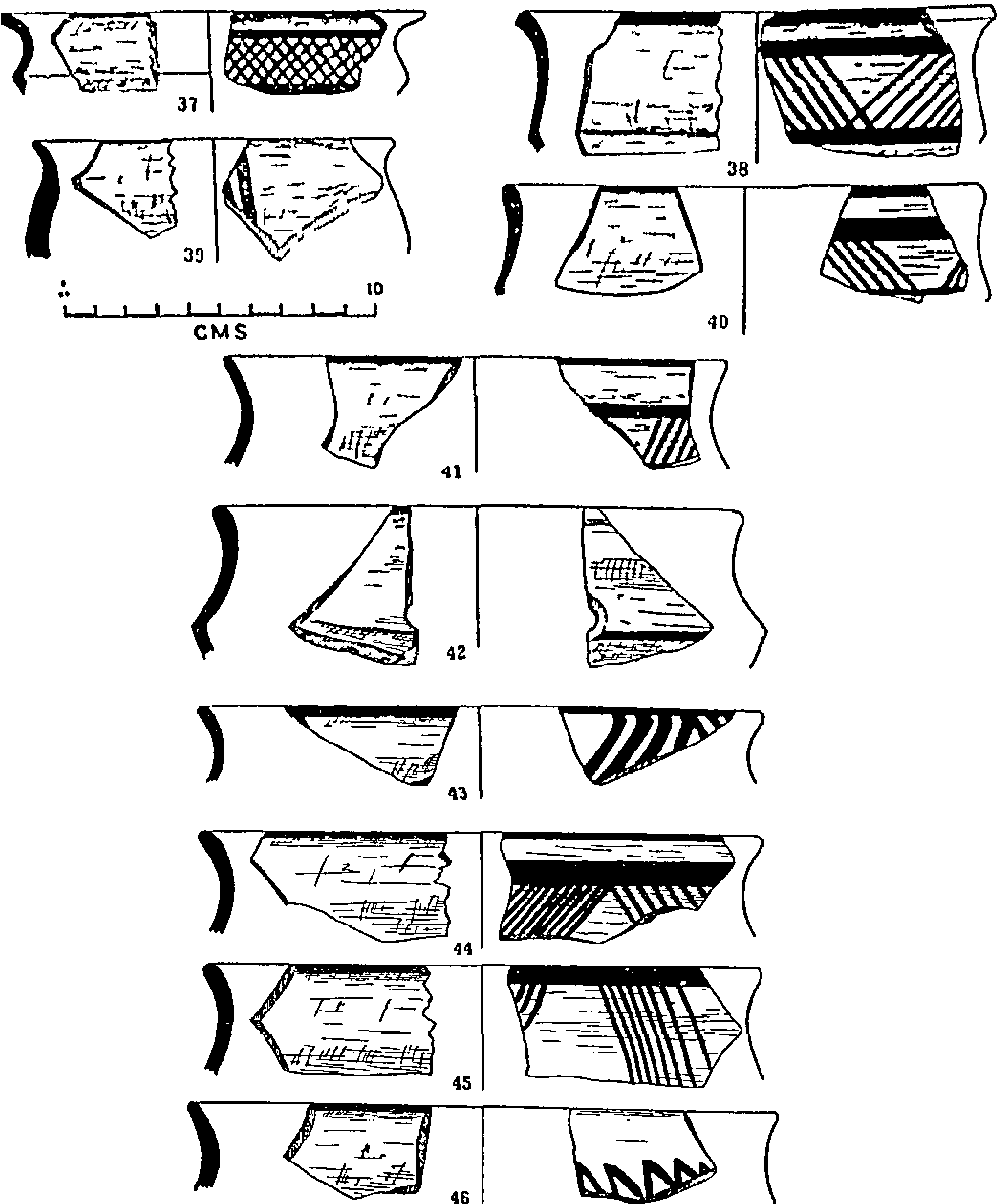
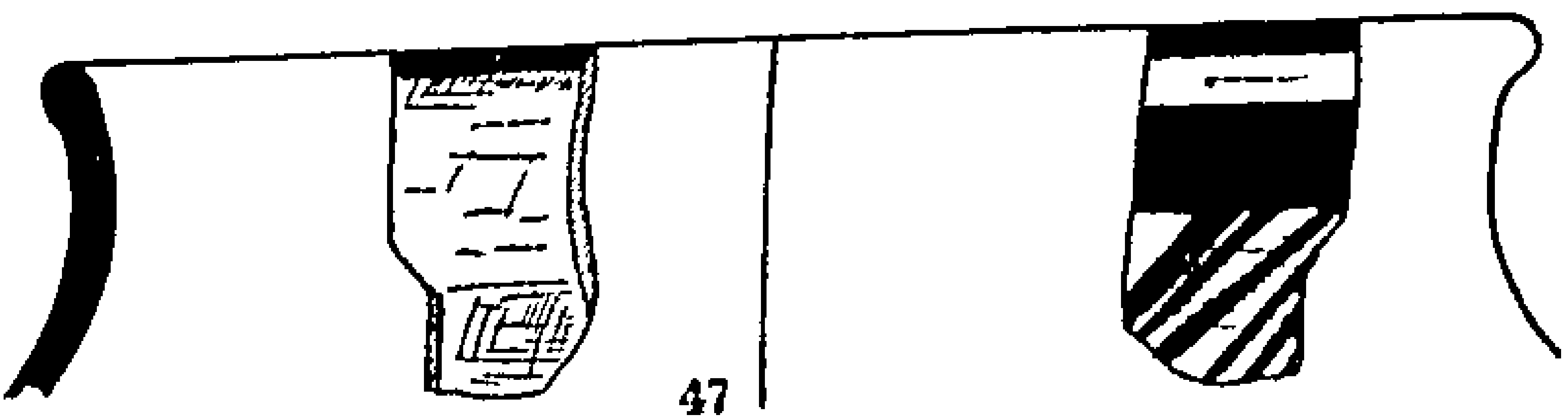
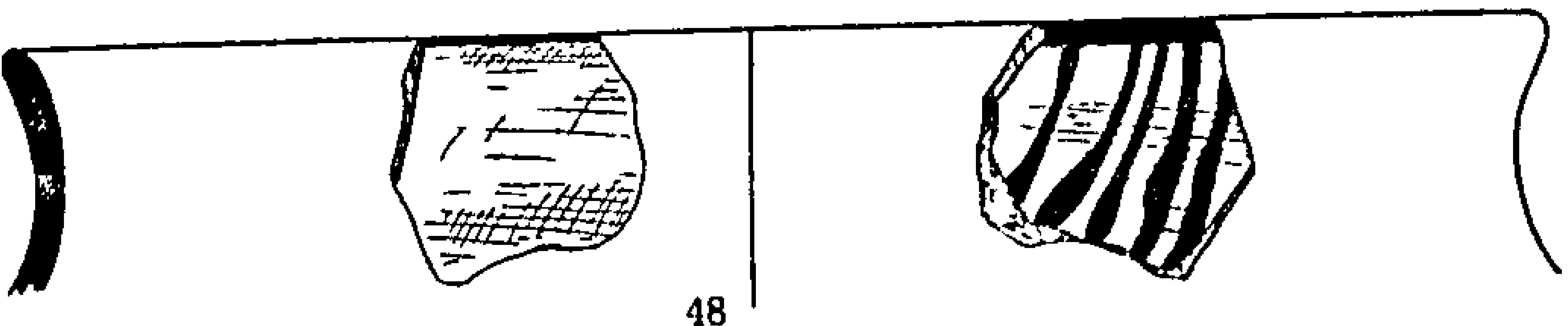
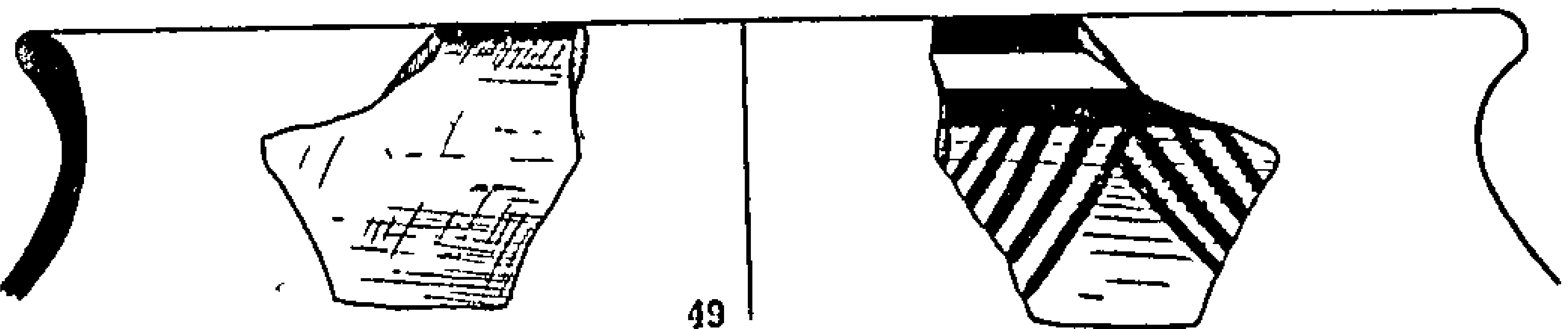


Fig 66 Types 37 46

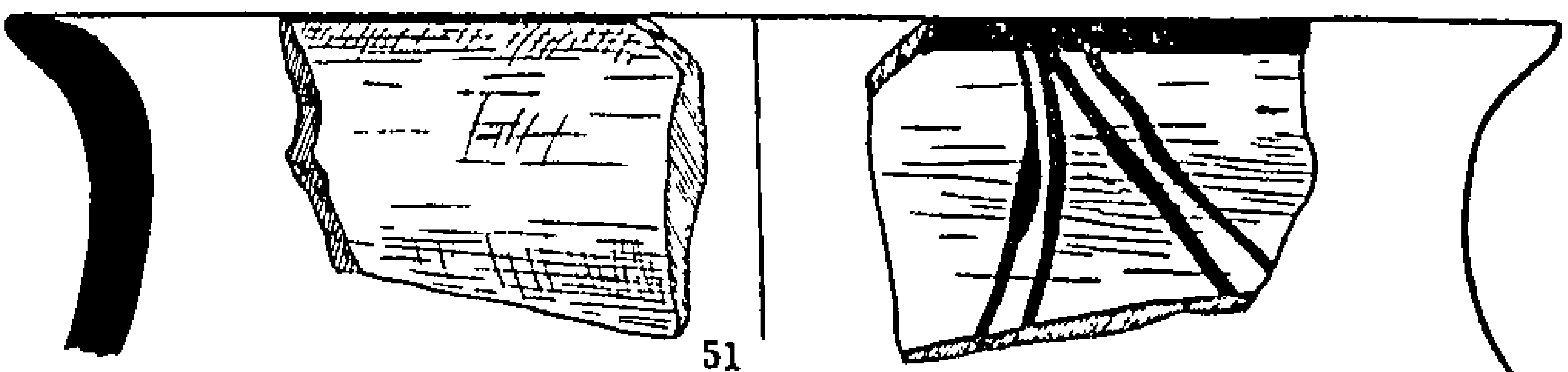
(*See p 169*)


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CMS


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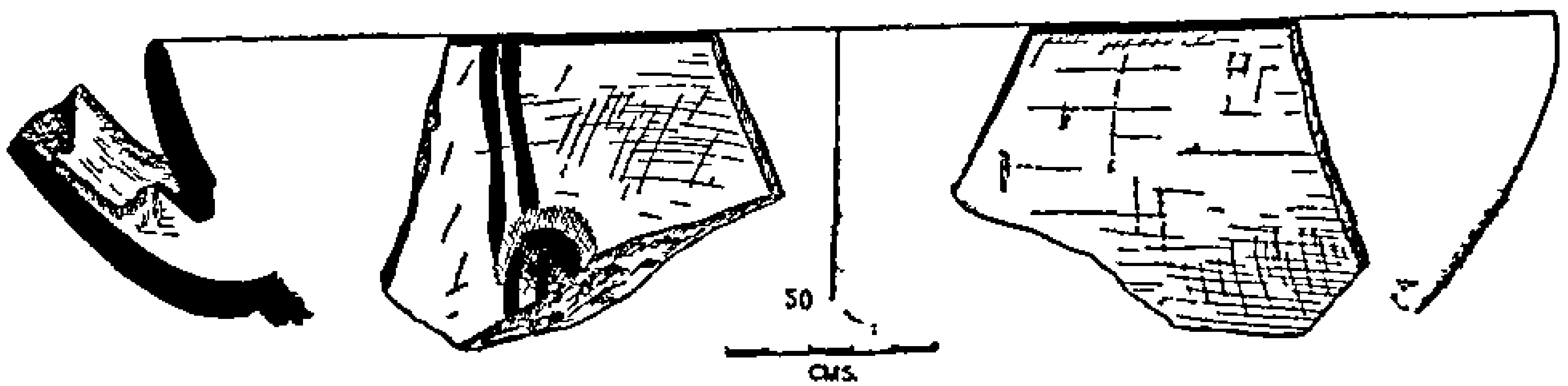


Fig 68 Type 50

(*See p 170*)

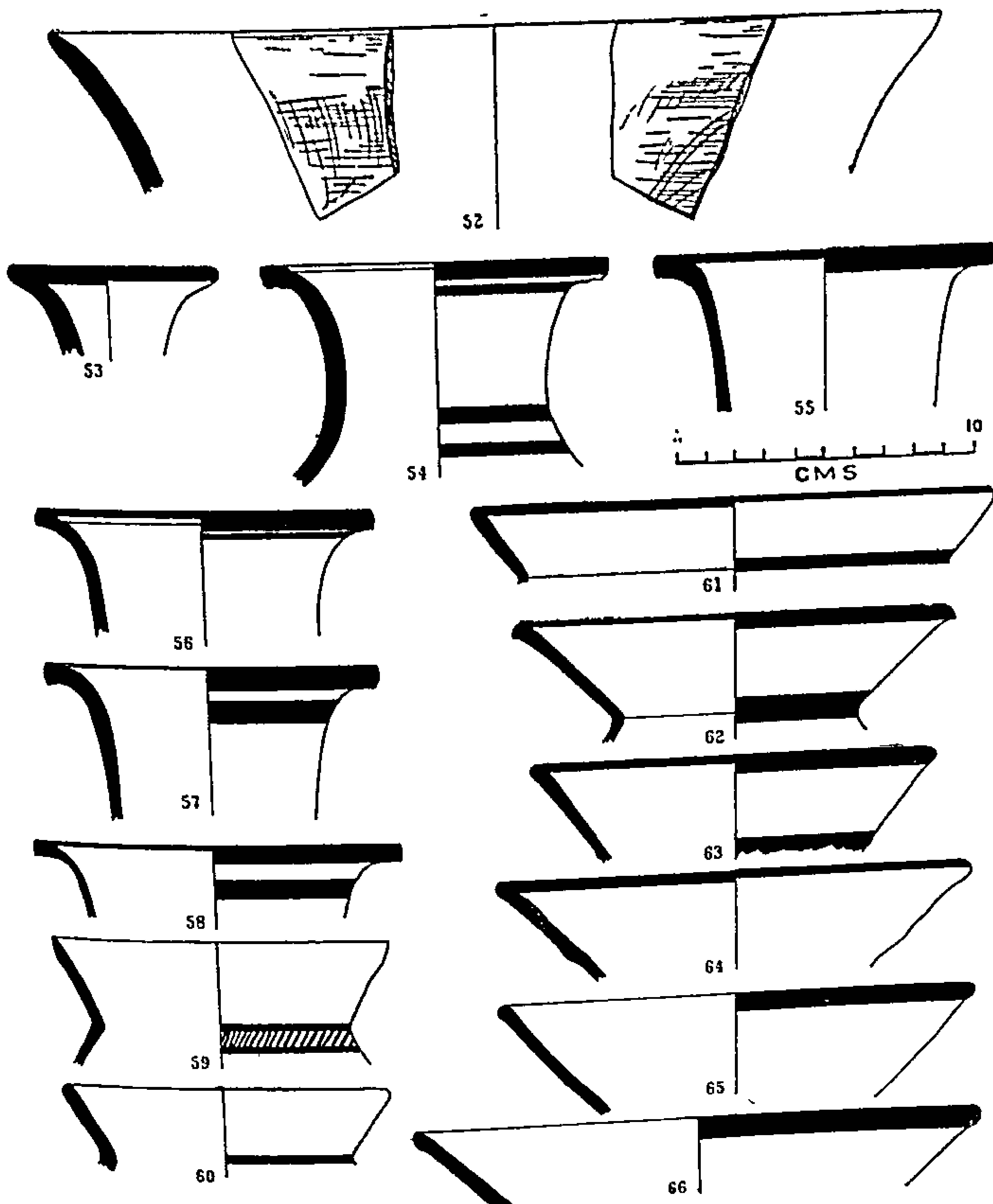


Fig 69 Types 52-66 Simple and Unpainted

(See pp. 170 71)

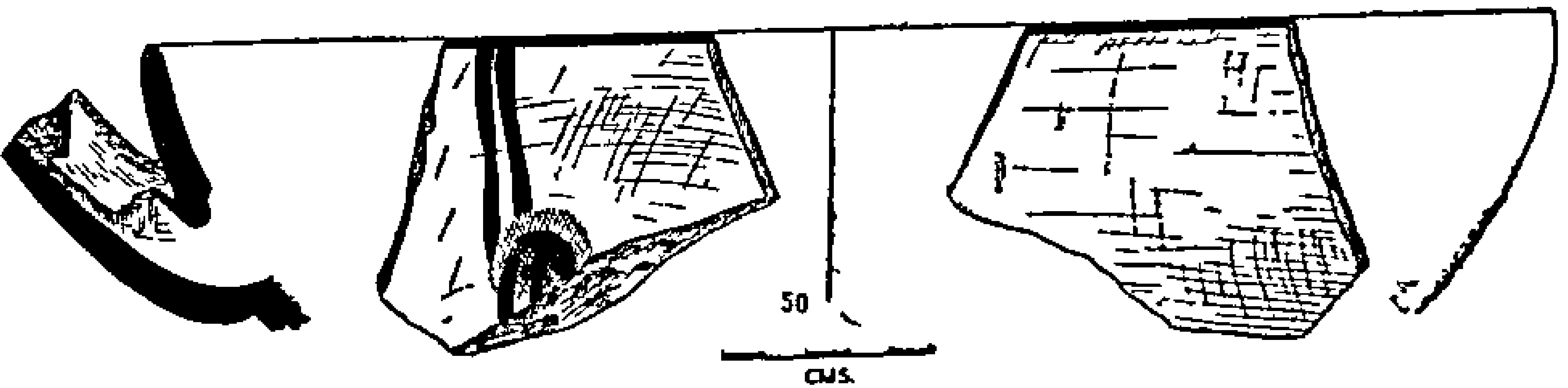


Fig 68. Type 50
(*See p 170*)

Types 60 66 represent probably the flaring straight sided rims of vessels having an acute carination on the belly and rounded base as indicated by a few intact but unstratified specimens [See Fig 61 and pl XXXIV]

Fig 70 (*Types 67 73*)

Type 67 (Jrw 2275) is a *bowl* of convex profile with a slightly inturned and rounded rim Medium grained brick ware light tan slip An applied band of finger tip ornament just below the rim on the exterior

Type 68 (Jrw 1/289) is a *bowl* thick walled almost straight sided with ledge like projection on the rim Coarse grained black ware of medium fabric a fine thick tan slip and a thin greyish black slip on the inside and outside respectively The exterior burnished The decoration on outer rim projection of wedge shaped projections fashioned by removing thin slices by vertical and slanting cuts

Type 69 (Jrw 1/281) is a deep *basin* thick of convex profile with a rim distinguished by horizontally flattened top and a slight internal flange Coarse grained black ware Thick tan slip inside light outside Marks of burnishing on the inside Applied thin band of finger tip ornament at the rim

Type 70 (Jrw 3243) is a smaller variant of Type 69 (Jrw 1/281) Medium grained black ware of fine fabric and is perhaps treated with some kind of blackish slip on both surfaces Perhaps the interior surface was burnished

Type 71 (Jrw 3223) *Basin* thick walled having perhaps a rounded base with a rim internally beaked and bevelled to the outside and rounded Coarse grained black ware thick light tan slip String course of finger tip impressions on the rim

Type 72 (Jrw 1/323) Similar to Type 71 but there is a ledge like small projection at the rim

Type 73 (Jrw 777) Almost similar in type and decoration to Type 71

Fig 71 (*Types 74-81*)

Types 74 (Jrw 3232) A variant of Types 72 73 except for a slight difference in shape of the rim

Type 75 (Jrw 3241) do do

Type 76 (Jrw 3218) Similar to above but with a slightly outturned rounded and internally bevelled rim Coarse grained brick ware with a thin orange coloured slip on the exterior

Types 77 77a (Jrw 2573) Almost similar to Types 72 73 but for slight variations in rim and the decoration motif

Type 78 (Jrw 1385) *Basin* with slightly slanting straight side Rim with flattened top and two rounded projections one on either side Coarse grained black ware of medium fabric Thick pale tan slip The interior perhaps burnished The rim externally notched

Type 79 (Jrw 1459) *Basin* with steeply slanting sides having a corrugated exterior and rim bevelled to the outside and externally squared Medium grained black ware Pale tan slip Fully burnished Finger tip impressions on the rim

Type 80 (Jrw 2571) Almost similar to Type 70

Type 81 (Jrw 2488) *Bowl* or *basin* with thin slanting but wavy sides and a rim with similar outline Fine grained tan ware Brown slip

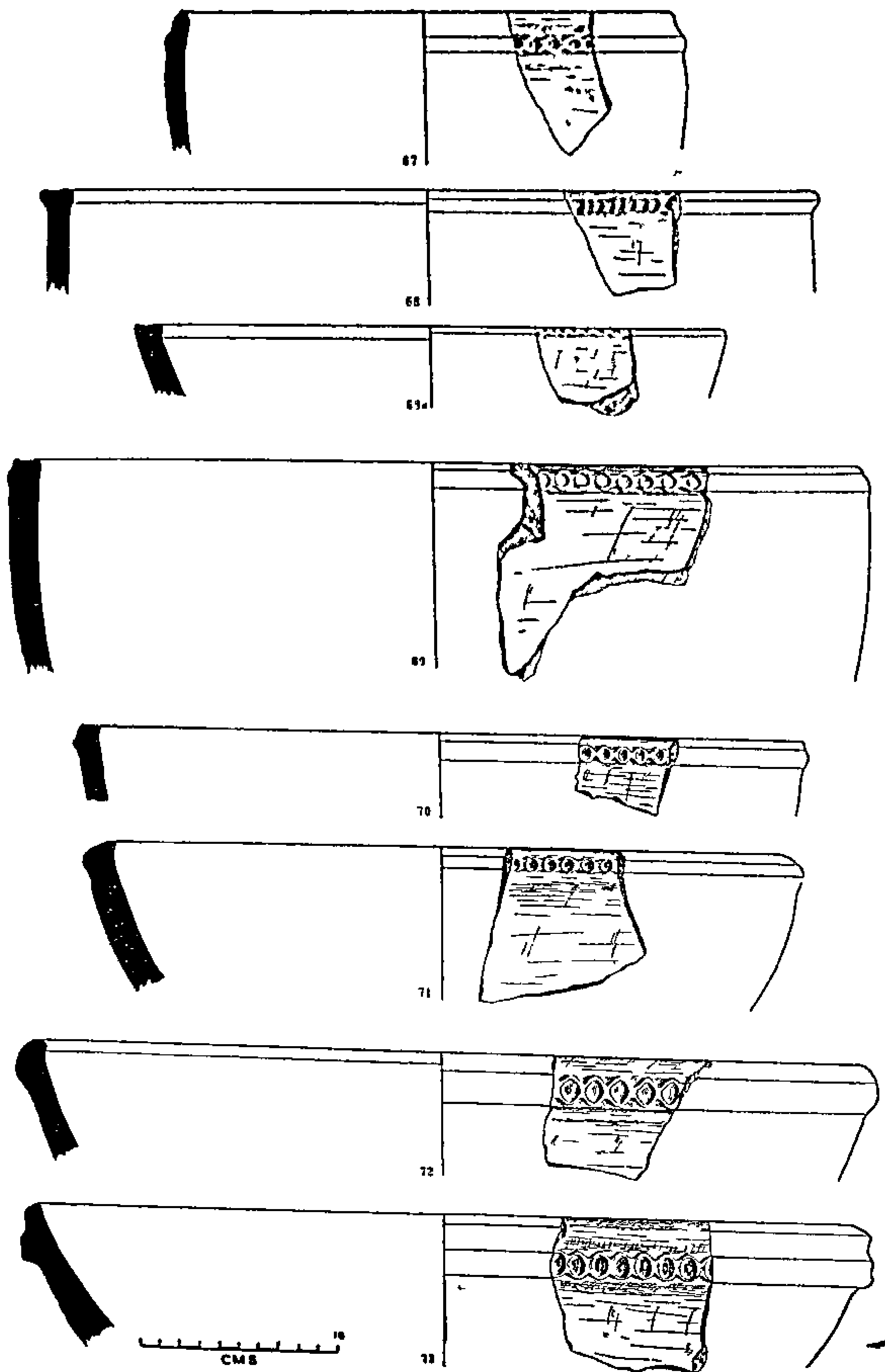


Fig 70 Types 67-73 Decorated

(See p. 171)

Types 60 66 represent probably the flaring straight sided rims of vessels having an acute carination on the belly and rounded base as indicated by a few intact but unstratified specimens [See Fig 61 and pl XXXIV]

Fig 70 (*Types 67 73*)

Type 67 (Jrw 2275) is a *bowl* of convex profile with a slightly inturned and rounded rim Medium grained brick ware light tan slip An applied band of finger tip ornament just below the rim on the exterior

Type 68 (Jrw 1/289) is a *bowl* thick walled almost straight sided with ledge like projection on the rim Coarse grained black ware of medium fabric a fine thick tan slip and a thin greyish black slip on the inside and outside respectively The exterior burnished The decoration on outer rim projection of wedge shaped projections fashioned by removing thin slices by vertical and slanting cuts

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Type 72 (Jrw 1/323) Similar to Type 71 but there is a ledge like small projection at the rim

Type 73 (Jrw 777) Almost similar in type and decoration to Type 71

Fig 71 (*Types 74 81*)

Types 74 (Jrw 3232) A variant of Types 72 73 except for a slight difference in shape of the rim

Type 75 (Jrw 3241) do do

Type 76 (Jrw 3218) Similar to above but with a slightly outturned rounded and internally bevelled rim Coarse grained brick ware with a thin orange coloured slip on the exterior

Types 77 77a (Jrw 2573) Almost similar to Types 72 73 but for slight variations in rim and the decoration motif

Type 78 (Jrw 1385) *Basin* with slightly slanting straight side Rim with flattened top and two rounded projections one on either side Coarse grained black ware of medium fabric Thick pale tan slip The interior perhaps burnished The rim externally notched

Type 79 (Jrw 1459) *Basin* with steeply slanting sides having a corrugated exterior and rim bevelled to the outside and externally squared Medium grained black ware Pale tan slip Fully burnished Finger tip impressions on the rim

Type 80 (Jrw 2571) Almost similar to Type 79

Type 81 (Jrw 2488) *Bowl* or *basin* with thin slanting but wavy sides and a rim with similar outline Fine grained tan ware Brown slip

FIG 72 (*Types 82-85*)

Type 82 (Jrw 2474) *Storage jar* (rānja) with a globular body and slightly inturned rim The latter is thickened and flat topped Finger tip impressions Coarse grained black ware Tan slip The exterior partially black owing to insufficient firing but is burnished

Type 83 (Jrw 3225) *Storage jar* comparatively thin walled with a short flaring neck and a sharp edged rim Coarse grained black and brown ware of medium fabric Blackish tan slip Band of fingertip impressions on the neck

Type 84 (Jrw 779) *Large jar* with a flaring neck, having a blunt edged rim Coarse grained brick ware Thick tan slip Exterior is heavily burnished At the base of the neck is a ridge which bears gouge marks

Type 85 (Jrw 780) is a larger variant of Type 84 Deep-somewhat semi circular hollow impressions on the neck band

FIG 73 (*Types 86 89*)

Type 86 (Jrw 1951) Thick walled jar of perhaps ellipsoidal body Coarse grained black ware Very thick light tan slip Both surfaces perhaps burnished Applied band of finger tip ornament on the neck

Type 87 (Jrw 2724) is a larger variant of Type 86 A double row of finger tip impressions on the neck

Type 88 (Jrw 3322) Large thick walled storage jar with ridged neck bearing finger tip impressions and a thickened everted rim with rounded edge Coarse grained black ware Thick tan slip

Type 89 (Jrw 3325) Larger variant of the above

FIG 74 (*Types 90 101*)

Type 90 (Jrw 800) Small thick walled flat based shallow *bowl* (lamp ?) Coarse grained brick ware unslipped Handmade

Type 91 (Jrw 3340) Thin walled, deep, flaring *bowl* with a flat ringed base *Coarse grained brown ware unslipped Turned perhaps on a slow wheel*

Type 92 (Jrw 345) Small, vertical necked rimless globular *jar*, medium grained brownware No slip inside the exterior with a thin black slip Probably handmade

Type 93 (Jrw 3227) Small egg shaped *bowl* of unusally thick wall and incurved and rounded rim Medium grained tan ware Unslipped Handmade

Type 94 (Jrw 3351) Long (?) neck of a vessel with a ridged exterior and an out turned and externally squared rim Coarse grained gritty brick ware of medium fabric red slip peeling off at places

Type 95 (Jrw 3355) Long (?) *neck* of a jar or vessel with a flanged rounded and internally grooved rim. Coarse grained tan ware of medium fabric Brownish orange slip peeling off at places

Type 96 (Jrw 3354) A slightly larger variant of Type 95

Type 97 (Jrw 3361) Another variant of Type 95

Type 98 (Jrw 3367) Neck, flaring with rounded edge, of fine grained tan ware

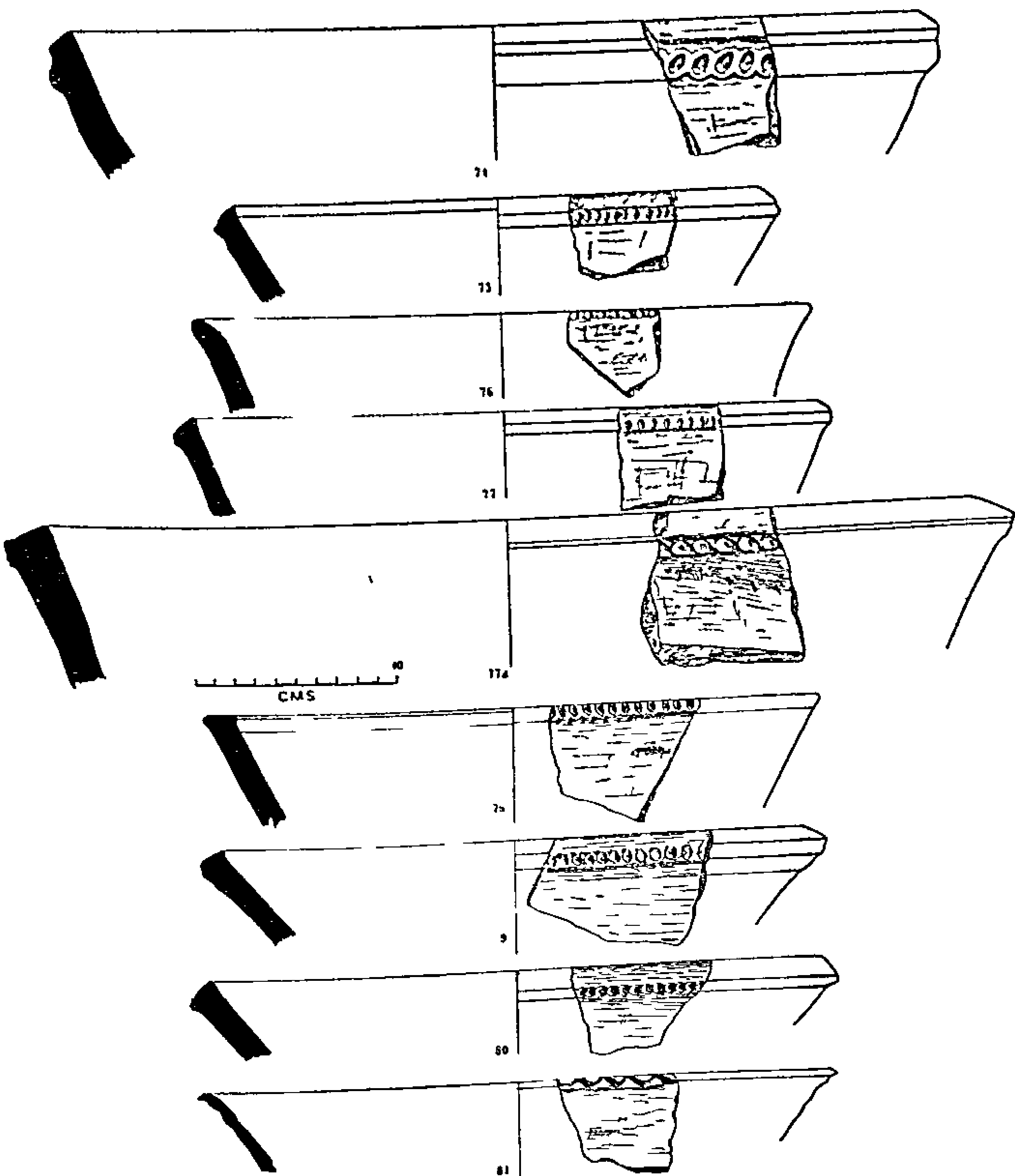


Fig 71 Types 74 81 Decorated

(*See p* 171)

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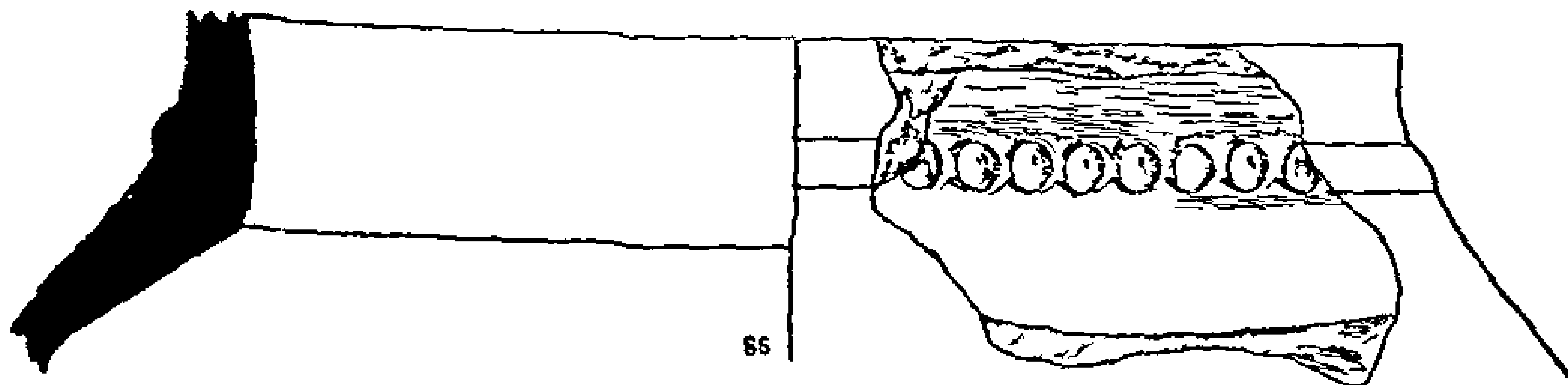
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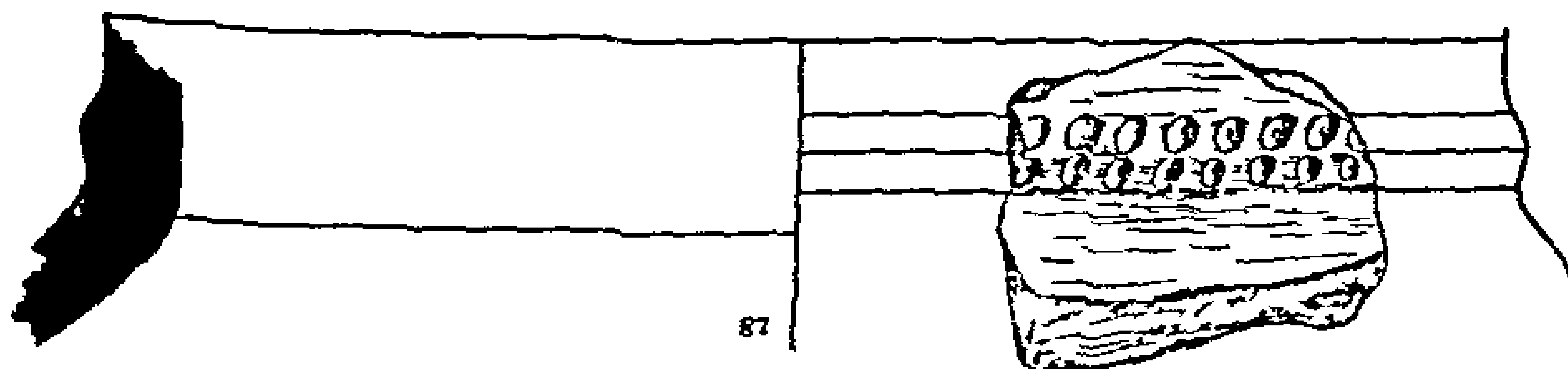
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Fig 72 Types 82-85 Decorated

(See p 179)





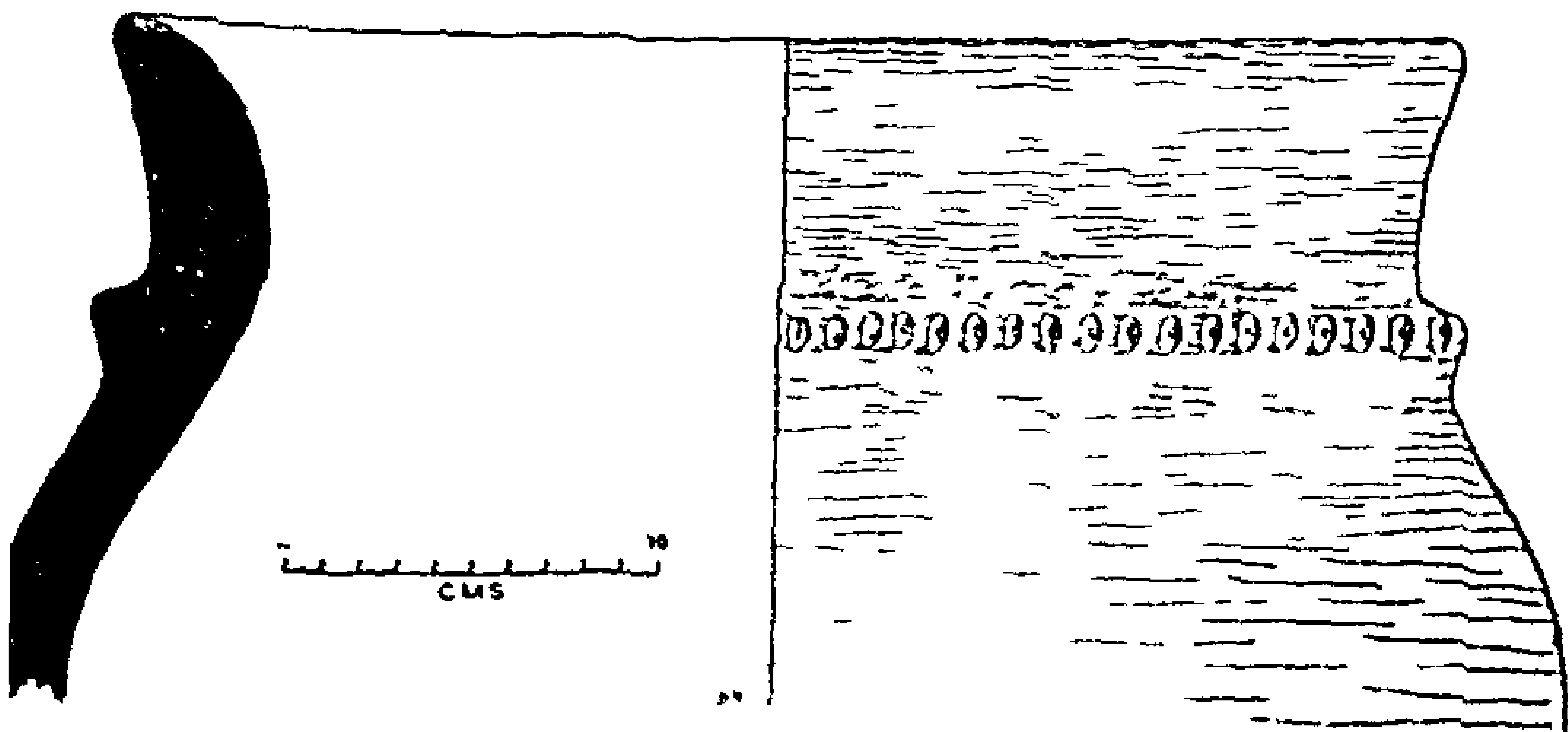


Fig. 73 Types 85-89 Decorated

(See p. [illegible])

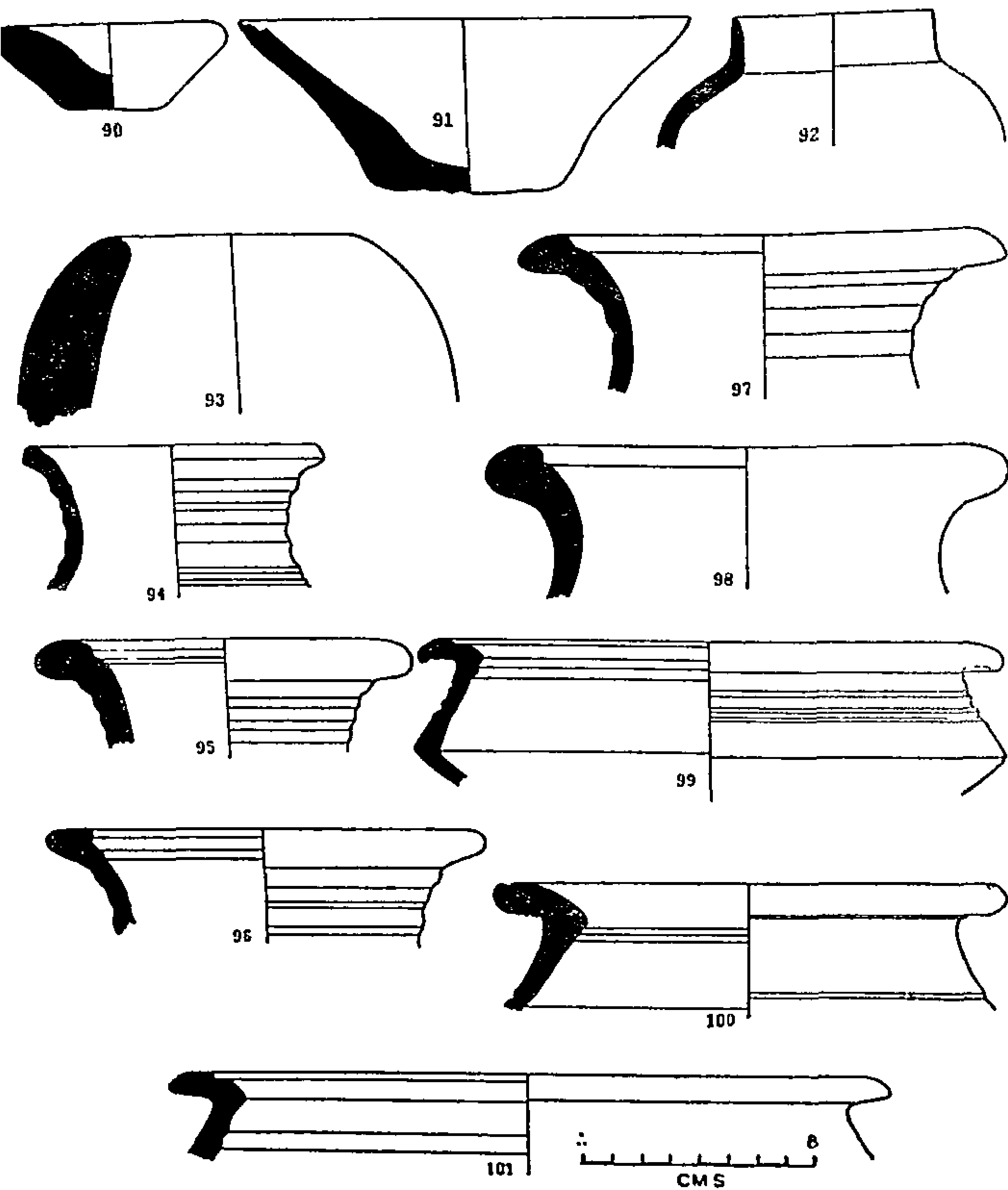


Fig 74 Types 90-101 Simple

(See p 172)

Type 99 (Jrw 3352) Carinated vessel of black and red ware with a grooved exterior and a flanged and beaked rim Red burnished slip on the outside

Type 100 (Jrw 3363) Perhaps a *cooking vessel* with a flanged and rounded rim having grooves on the upper and under surfaces Medium grained brown ware of medium fabric Red burnished slip

Type 101 (Jrw 3364) is a larger variant of Type 100

Fig 75 (*Types 102 110*)

Type 102 (Jrw 3353) is a variant of Type 100 described above Of the same ware and fabric and treated with red burnished slip

Type 103 (Jrw 3357) Vessel with a flanged and rounded rim and an externally grooved neck Coarse grained tan ware with an admixture of husky temper Red burnished slip

Type 104 (Jrw 3359) Wide mouthed vessel with slightly inturned sides and externally beaked rim Medium grained brown ware Thick red slip Exterior burnished

Type 105 (Jrw 3365) A smaller variant of Type 104 without the groove

Type 106 (Jrw 3358) A larger variant of Type 104 but without grooves

Type 107 (Jrw 3360) Large thick walled jar with a heavy roll rim Medium grained tan burning grey ware Red slip Exterior burnished

Type 108 (Jrw 3366) is a hollow lid with a short oblique rounded rim unslipped coarse grained tan ware

Type 109 (Jrw 3348) Lower part of a vessel with rounded base and a projection at the top to receive the lid Red slip outside

Type 110 (Jrw 3366 a) Stand with inturned sides having an externally beaded rim Coarse grained grey ware Thick tan slip Exterior burnished and is black and red due to inverted firing

Fig 76 (*Types 111 117*)

Type 111 (Jrw 2879) Rimless bowl (?) with straight tapering sides Medium grained black ware a well levigated whitish black slip Fully burnished

Type 112 (Jrw 1901) Shallow pan with perhaps a thickened and pronounced convex bottom and a slightly everted and tapered rim Cf Type 6 (Jrw 1/165) Coarse grained black ware well levigated tan burning black slip Exterior burnished

Type 113 (Jrw 2462) Larger variant of Type 113

Type 114 (Jrw 1315) Another larger variant of Type 112

Type 115 (Jrw 1/319) Vessel with a flaring neck Medium grained black ware well levigated pale tan slip Fully burnished

Type 116 (Jrw 803) Shallow dish with perhaps rounded base and an everted rounded rim Coarse grained black ware Fine thick burnished tan slip inside and black slip outside

Type 117 (Jrw 3110) Rimless *dish* or bowl with flaring sides blackish grey ware thick well levigated tan slip Fully burnished

FIG 76A AND PL XXXV 1 2(*Types 118, 118a*)

Type 118 (Jrw) A vessel with rounded bottom and sides with wide angled neck and flaring rim Grey ware with smooth surfaces Probably a burial urn and comparable in type and fabric to the Brahmagiri burial urn T 37 which is reproduced here (See also Type 115 and Types 118 b—124)

Type 118a A much smaller vessel than the previous one but cruder, probably handmade as indicated by the irregular outline—inner and outer Probably a burial urn and comparable to Br T 39 which is also reproduced here

FIG 77 (*Types 118b 127*)

Type 118b (Jrw 776) Flaring rim of probably a vessel like the urn with thick tan burning black slip Fully burnished

Type 119 (Jrw 782) is a dish of concave profile, well levigated tan slip inside and thick black slip outside Both the surfaces are burnished

Type 120 (Jrw 1/284) Basin (?) with flaring sides and rim thinned at the edge Coarse grained blackish grey ware Thick black burnished slip

Type 121 (Jrw 3217) Small basin with rim thickened at the edge

Type 122 (Jrw 1921) Similar to Type 121 but of fine grained tan ware Fine, well levigated thick tan slip Smooth and fully burnished

Type 123 (Jrw 3227) A variant of Type 122

Type 124 (Jrw 1/294) Another variant of Type 122

Type 125 (Jrw 2467) A variant of Type 122

Type 126 (Jrw 2481) Shallow rimless basin rounded at the edge Coarse grained black ware Thick tan slip Fully burnished

Type 127 (Jrw 1/149) A variant of Type 126

FIG 78 (*Spouts and Lid handles*)

1 (Jrw 1/360) Short cylindrical spout of medium grained slate grey ware overfired red brown slip on the outside only Disfigured due to overfiring decorated with a broad black band along the upper edge from top to bottom Traces of a thin black line along the periphery of the bottom

2 (Jrw 1430) Fragment of a funnel spout of fine grained light tan ware, tan slip on the outside only Deep circumscribed line—perhaps a string impression—and a broad black band along the upper edge

3 (Jrw 1063) Straight funnel spout of fine grained tan ware, a thin red brown slip on the exterior only a black band round the mouth

4 (Jrw 1892) Straight funnel spout of fine grained light tan ware, orange red slip on the exterior only two black bands—one around the mouth and the other round the base

5 (Jrw 1/157) Straight funnel spout with rather concave outline, fine grained tan ware hardbaked and red brown slip on the exterior Simple black band along the upper edge

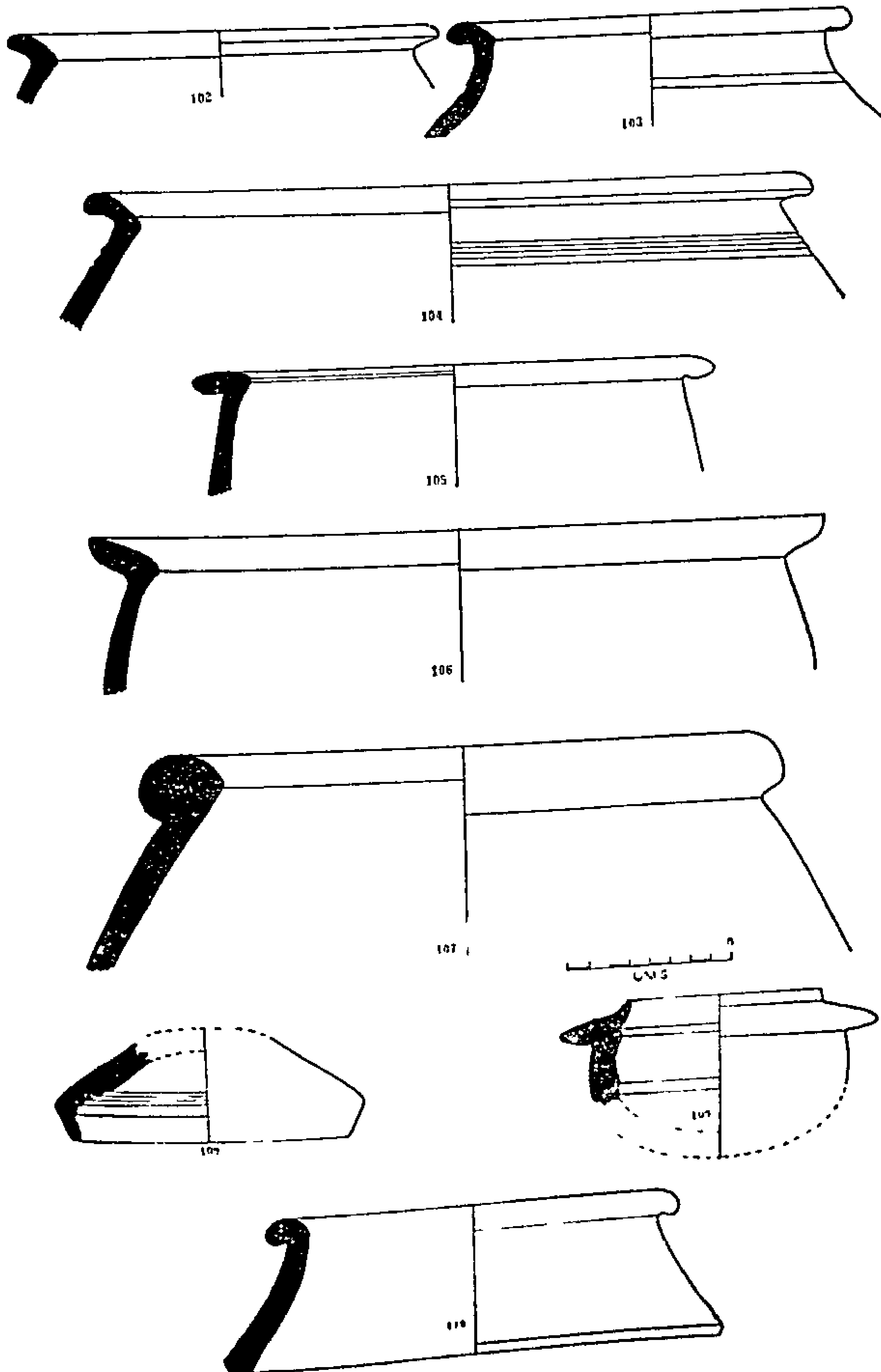


Fig. 75 Types 102-110 Simple (Ringed Rim)

(See p. 173)

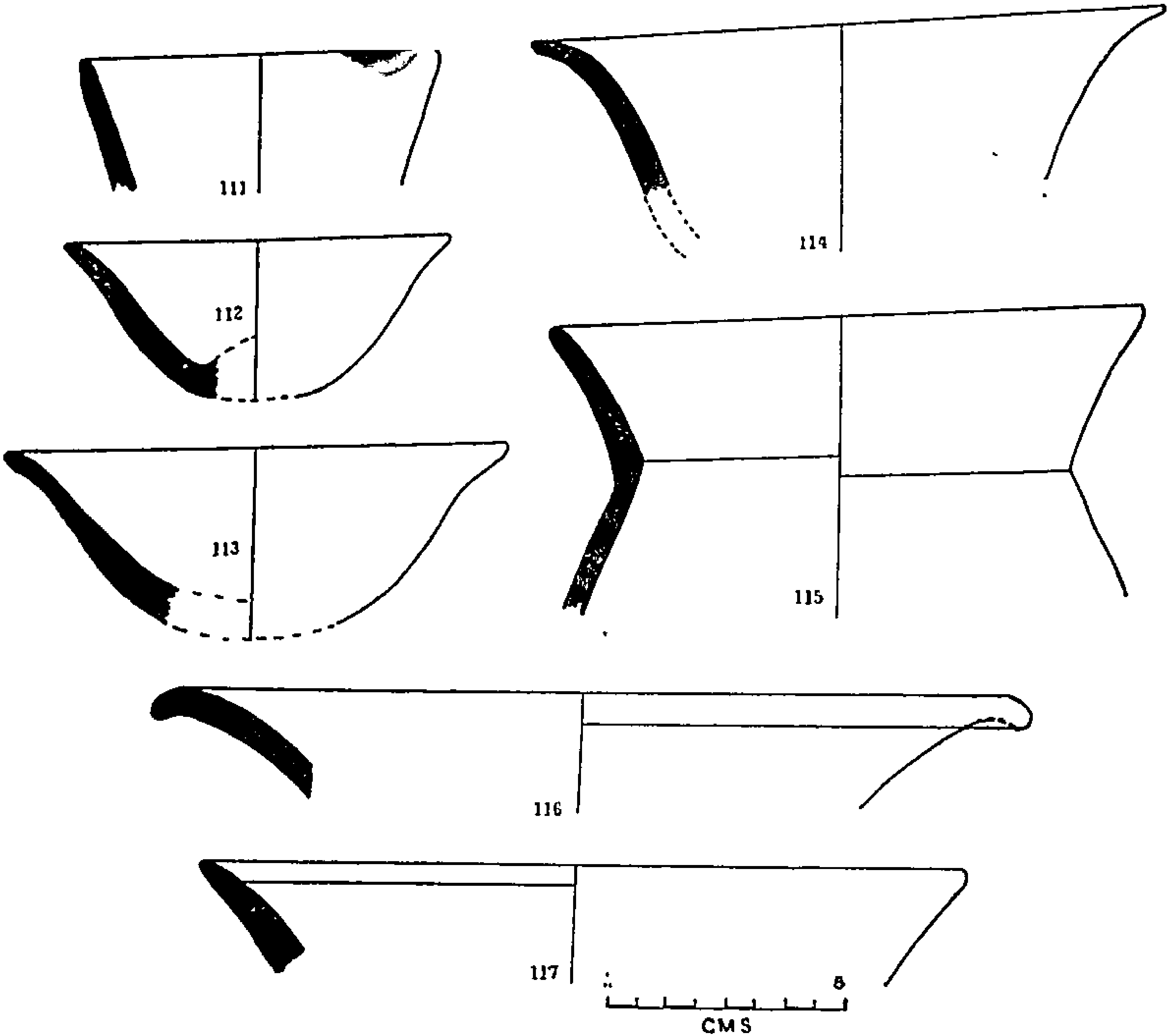
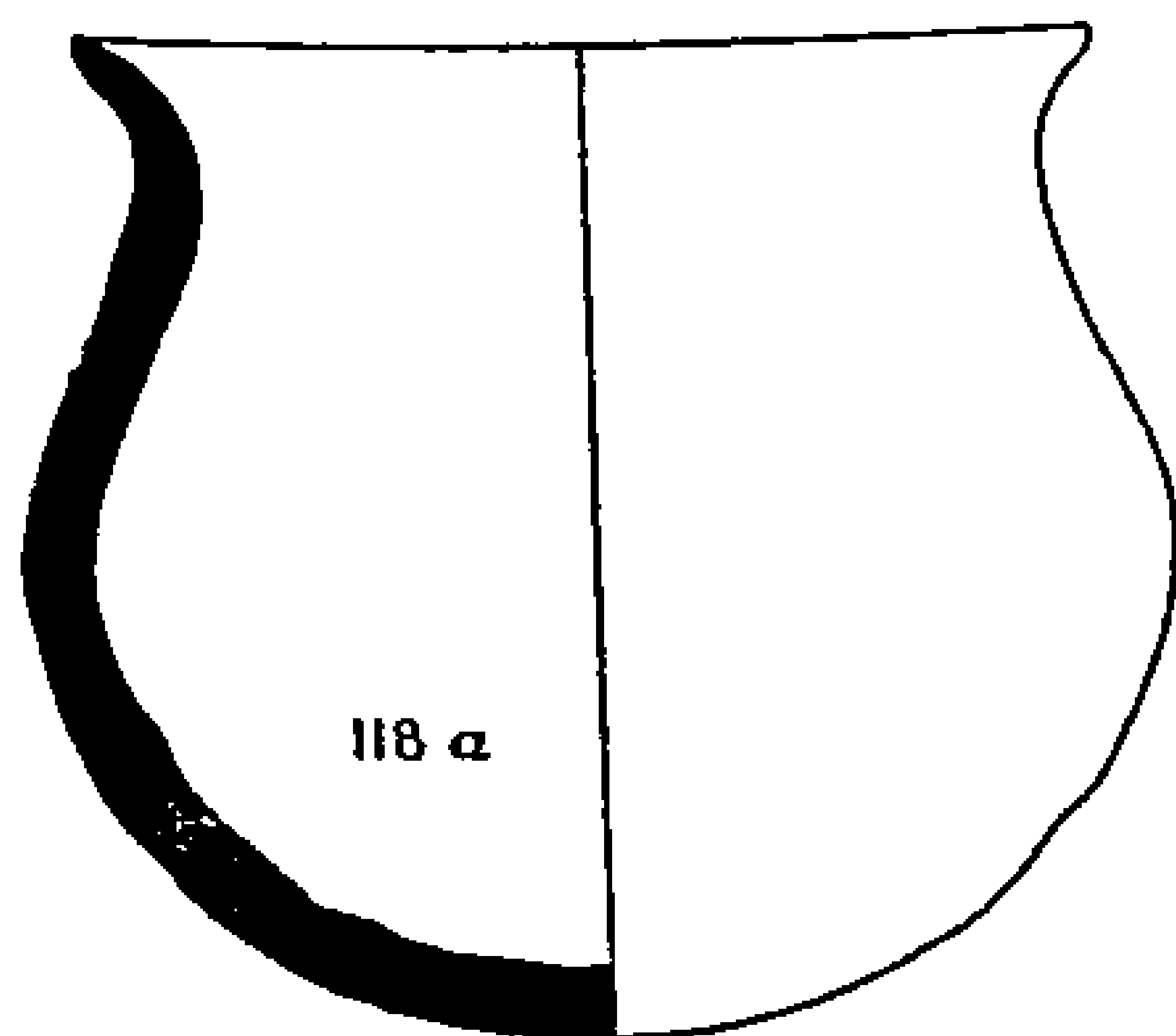


Fig. 76. Types 111-117 Shallow Bowls and Urns (?)
(See p. 173)

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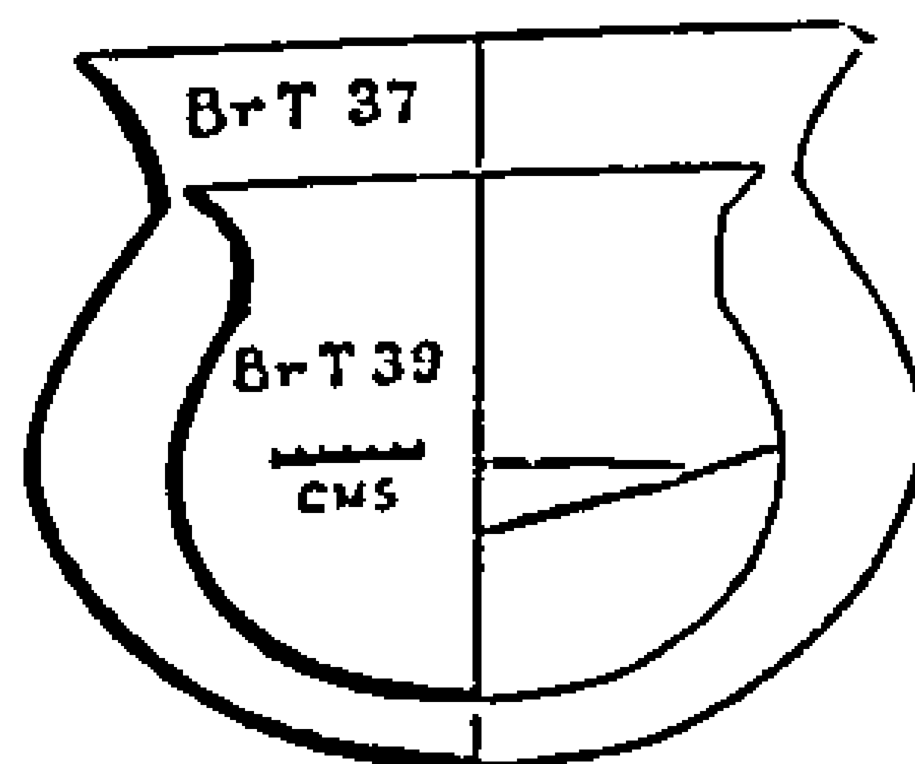


Fig 76a Grey ware Types 118 118a Urns (?)

(See p 174)

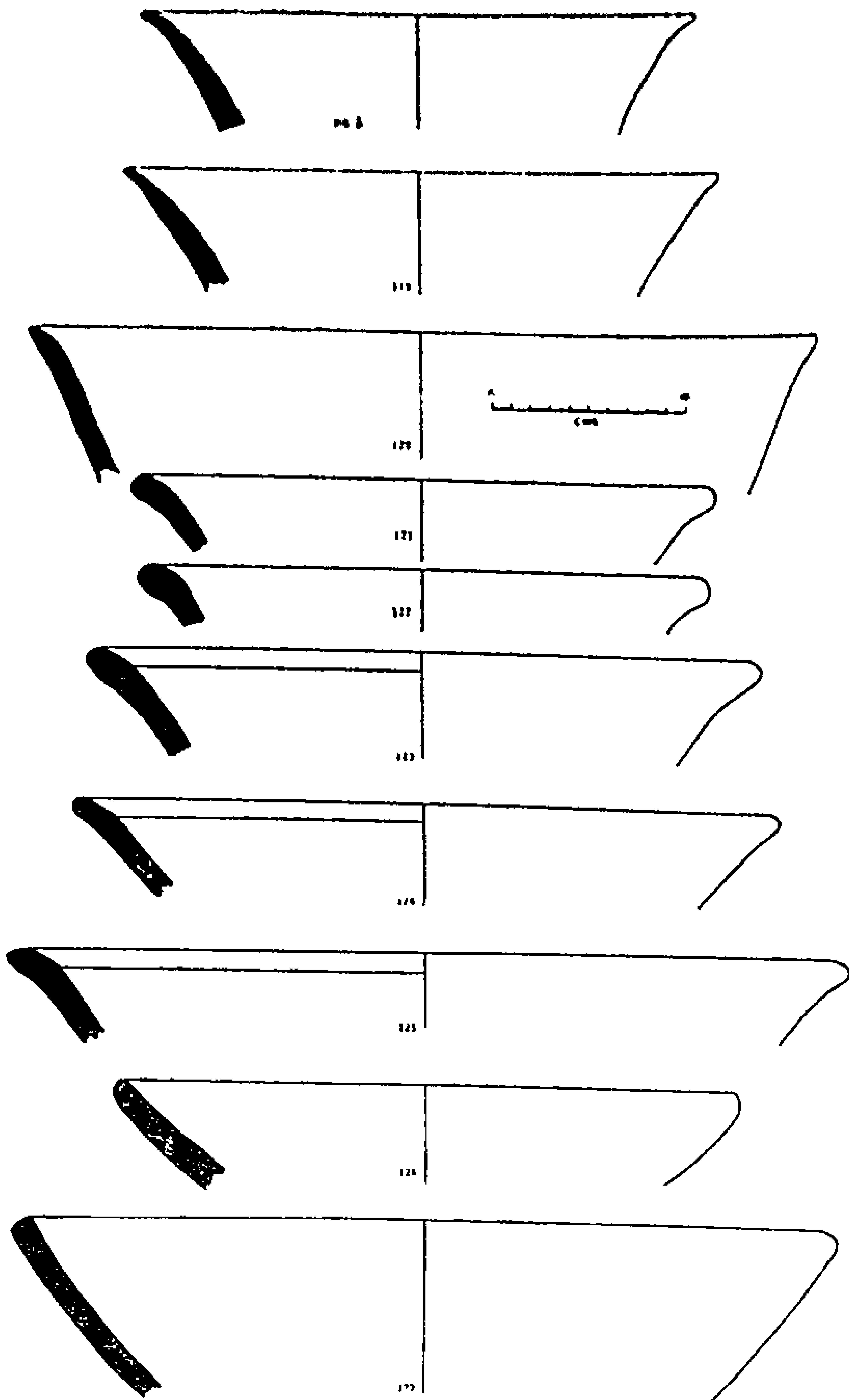


Fig 77 Types 118b, 119 127
(See p. 174)

6 (Jrw 2638) Short funnel or tubular spout of fine grained brick ware a brick red slip on the exterior, broad black band along the upper edge

7 (Jrw 525) Broken funnel spout of fine grained tan ware, red slip on the exterior, a broad black band along the upper edge

8 (Jrw 1431) Broken funnel spout of medium grained brick ware red brown slip on the exterior, a broad band in black along the upper edge

9 (Jrw 1064) Broken funnel spout, fine fabric, hardbaked, dark red slip on the exterior only, black band along the periphery of the base

10 (Jrw 611) Thick solid knob handle of probably a saucer shaped lid with a sagger base It is of coarse grained light tan ware, hardbaked, a fine grained slip of the same clay In the middle of the upper surface it bears two finger tip impressions

11 (Jrw 1/251) Thick solid knob handle of a saucer shaped lid with a sagger base It is of coarse grained black ware of rough fabric, indifferently fired, and covered with a tan slip

12 (Jrw 2743) Thick solid knob handle of a lid of fine grained slate ware fine fabric, hardbaked and covered with a fine black slip and burnished

Fig 79 (*Horizontal bands of the zig zag pattern*)

1 (Jrw 971) Shoulder piece, with designs in black, and probably a potter's mark on dark red background Coarse grained, blackish grey ware, hard baked, thick tan slip on both surfaces with a wash of dark red on the outer Handmade

2 (Jrw 1707) Shoulder piece, globular pot, wavy design on pink red Fine grained tan ware, hard baked [1]

3 (Jrw 1/13) Shoulder piece, globular vessel the design on red

4 (Jrw 1058) Neck shoulder fragment globular vessel, the design on dark red

5 (Jrw 931) Shoulder piece globular vessel design on pink red

6 (Jrw 1/291) Shoulder piece, globular vessel design on bright red Handmade

7 (Jrw 1078) Shoulder piece globular vessel the design on yellowish red

8 (Jrw 2577) Shoulder piece globular pot, the design on brown red

9 (Jrw 1162) Sherd probably shoulder piece globular pot, the design on dark pink

10 (Jrw 970) Shoulder piece globular pot design on pink

11 (Jrw 193) Shoulder piece globular pot the design on pinkish tan background Fine grained light grey ware and thick tan slip on the inner and outer surfaces respectively with a pinkish wash on the outer

12 (Jrw 2477) Fragment, large globular vessel, the design on brown red

Fig 80 (*Oblique Brush Strokes and Cross hatched and Blank Lozenges Squares and Rhomboids*)

1 (Jrw 1133) Sherd, the design on dark red

1 These sherds are usually of fine-grained well baked wares having grey, tan or brown burnt surfaces with the kinds of slips mentioned above Hence these details are omitted from the present description except where necessary

2 (Jrw 1086) Shoulder piece globular vessel bearing the design on deep red background.

3 (Jrw 877) Shoulder piece of a globular vessel, bearing the design on dark tan background

4 (Jrw 1108) Sherd bearing the design on pink background, tan ware, pink slip Wheel-turned

5 (Jrw 922) Sherd, design on cream background Coarse grained blackish grey ware, rough fabric, hard baked, thick light tan slip on both surfaces with a cream wash on the outer. Probably handmade

6 (Jrw 2/3117) Sherd, design on brown red

7 (Jrw 1154) Sherd, design on pink red

8 (Jrw 1/20) Fragment of a spouted, globular vessel, the design on dark red

9 (Jrw 1/159) Sherd, design on dark red

10 (Jrw 1399) Shoulder piece, globular vessel, the design on deep red

11. (Jrw 1061) Fragment, globular vessel, the design on dark or brown red

12 (Jrw 1317) Fragment, globular vessel, the design on dark red

Fig 81 (*Wavy line Pattern*)

1 (Jrw 4/1663) Fragment, globular vessel, the design on dark chocolate

2 (Jrw 2/3190) Shoulder piece, design on dark red

3 (Jrw 1/4) Shoulder piece, globular pot, the design on dark red

4 (Jrw 1067) Shoulder piece, globular vessel, the design on dark red ware

5 (Jrw 1/91) Shoulder piece globular vessel, the design on dark red

6 (Jrw 2/3170) Shoulder piece, globular vessel, design on dark red

7 (Jrw 1/55) Shoulder piece, globular vessel, the design on brown red

8 (Jrw 3172) Neck shoulder fragment, the design on yellowish red

9 (Jrw 1/23) Sherd design on orange pink

10 (Jrw 1/86) Shoulder piece, globular pot, the design on dark red

11 (Jrw 1/37) Neck shoulder fragment globular vessel, the design on red background

12 (Jrw 1075) Shoulder fragment, globular vessel the design on red slip

Fig 82 (*Solid Squares Grass pattern and miscellaneous designs*)

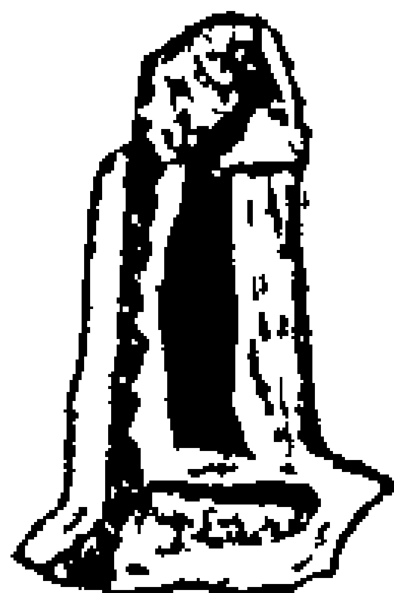
1 (Jrw 1/255 and 1/182) Shoulder piece globular pot, the design on dark tan

2 (Jrw 1/85) Probably shoulder piece fabric etc identical with the above

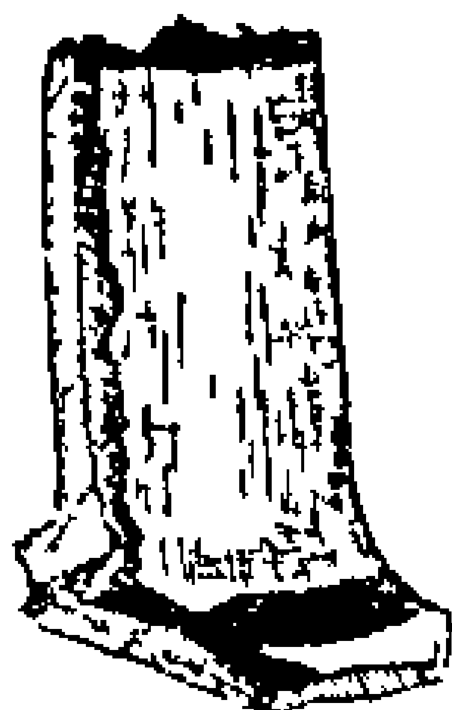
3 (Jrw 3226) Neck shoulder fragment of a carinated vessel, the design on dark red

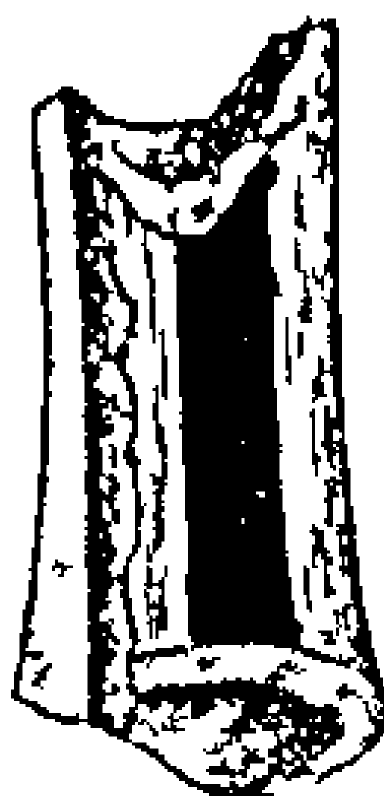
4 (Jrw 834) Shoulder piece of a carinated vessel the design on dark red

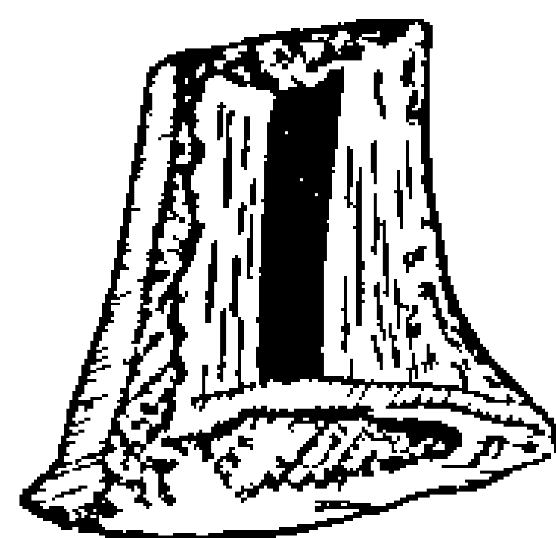

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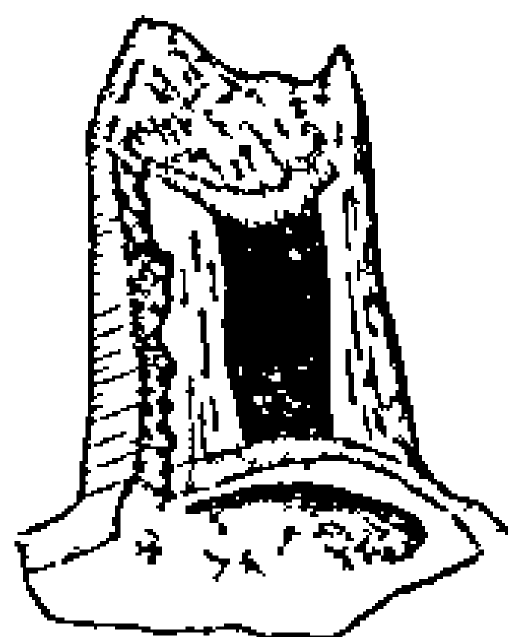

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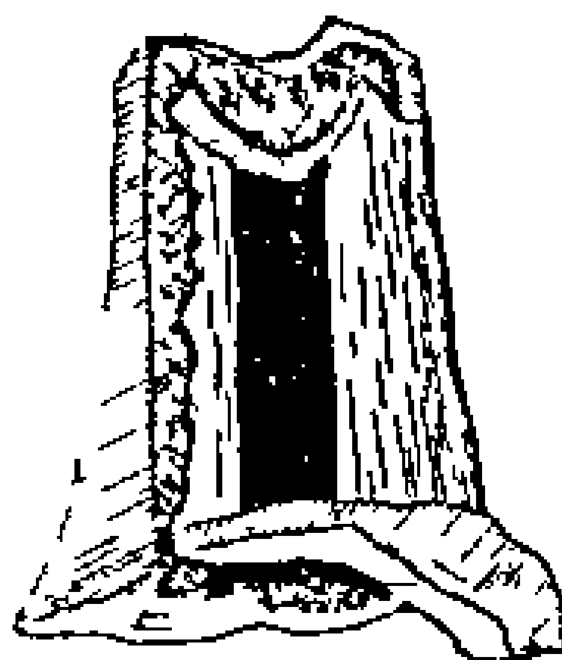

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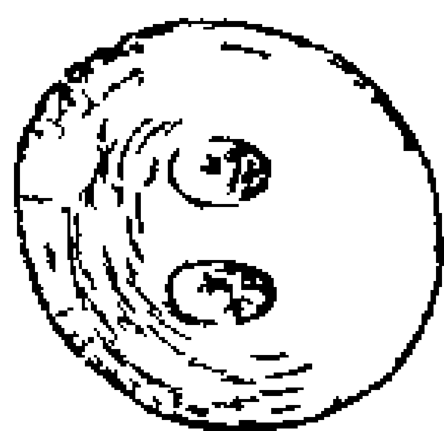

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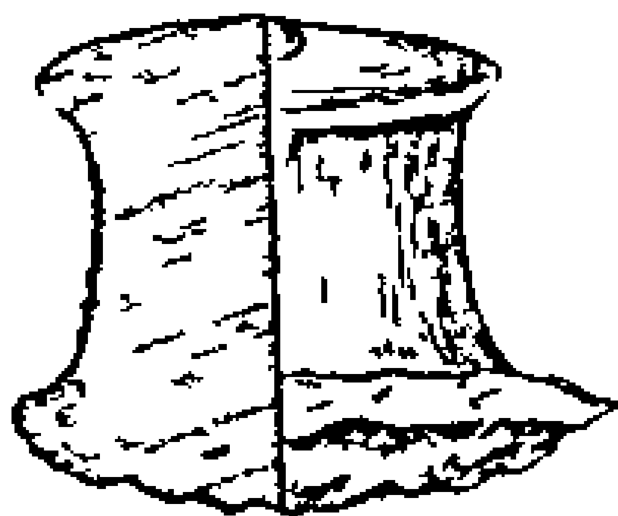


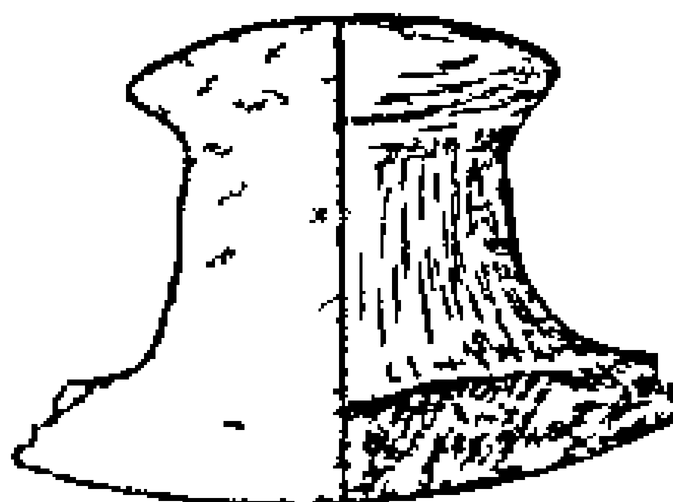

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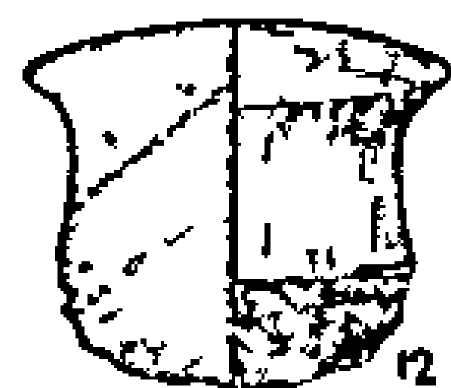

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Fig 78 Painted Spouts and knobs of Lids
(See pp 174 75)

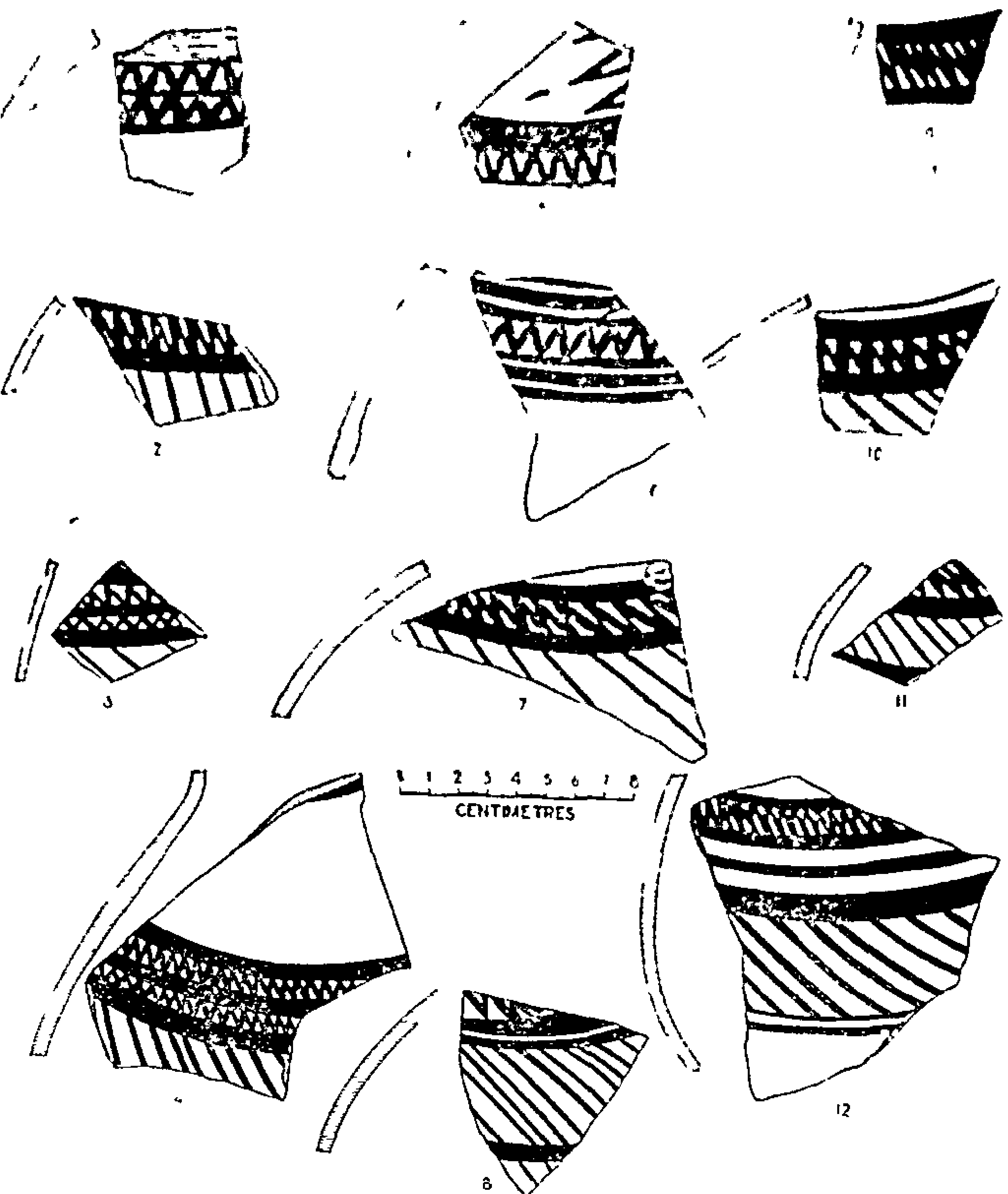


Fig 79 Zigzag patterns (1-12)

(*See p 175*)

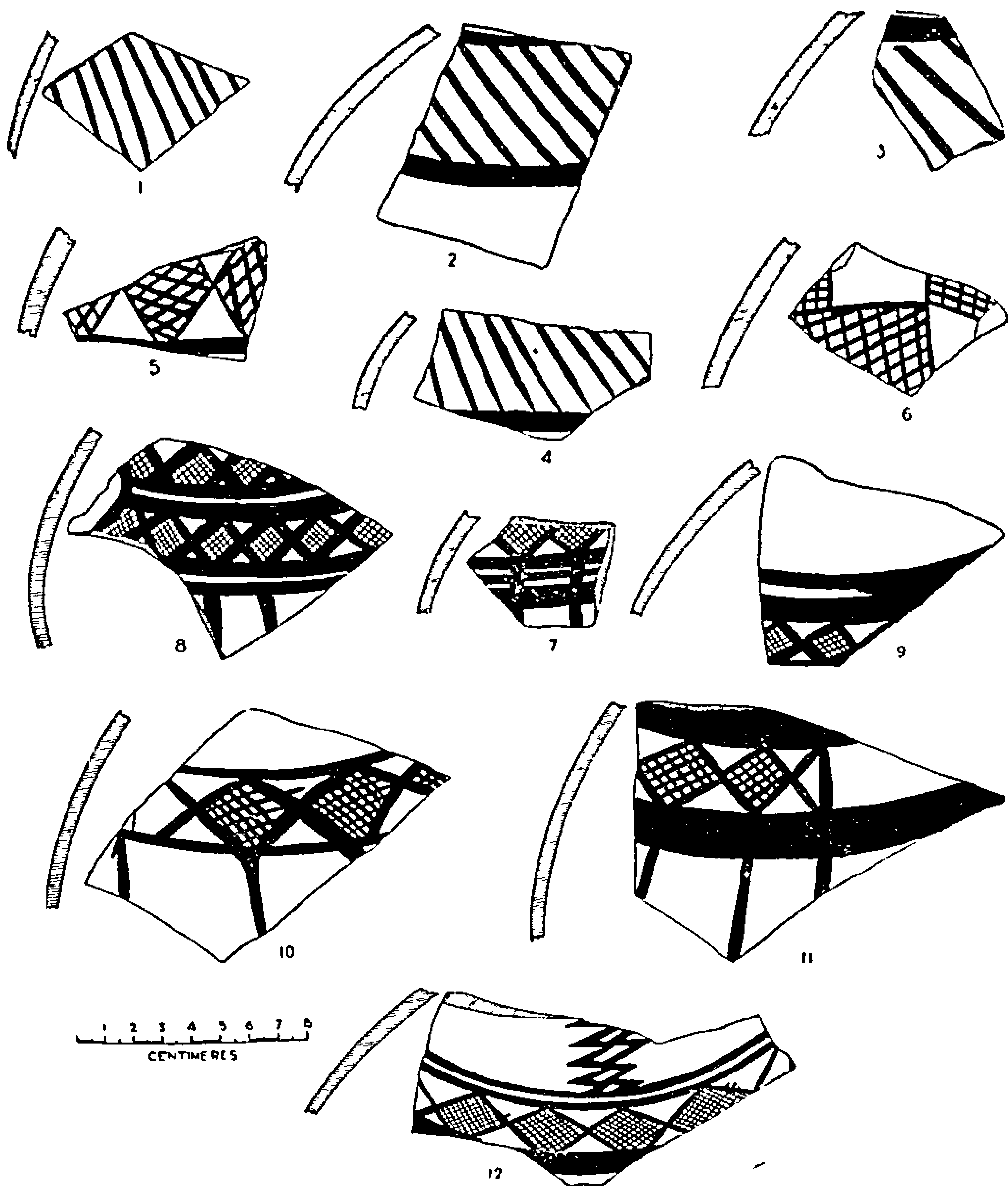


Fig 80 Oblique Brush Strokes Cross hatched and Blank Lozenges Squares and Rhomboids (115)
(See pp 175 76)

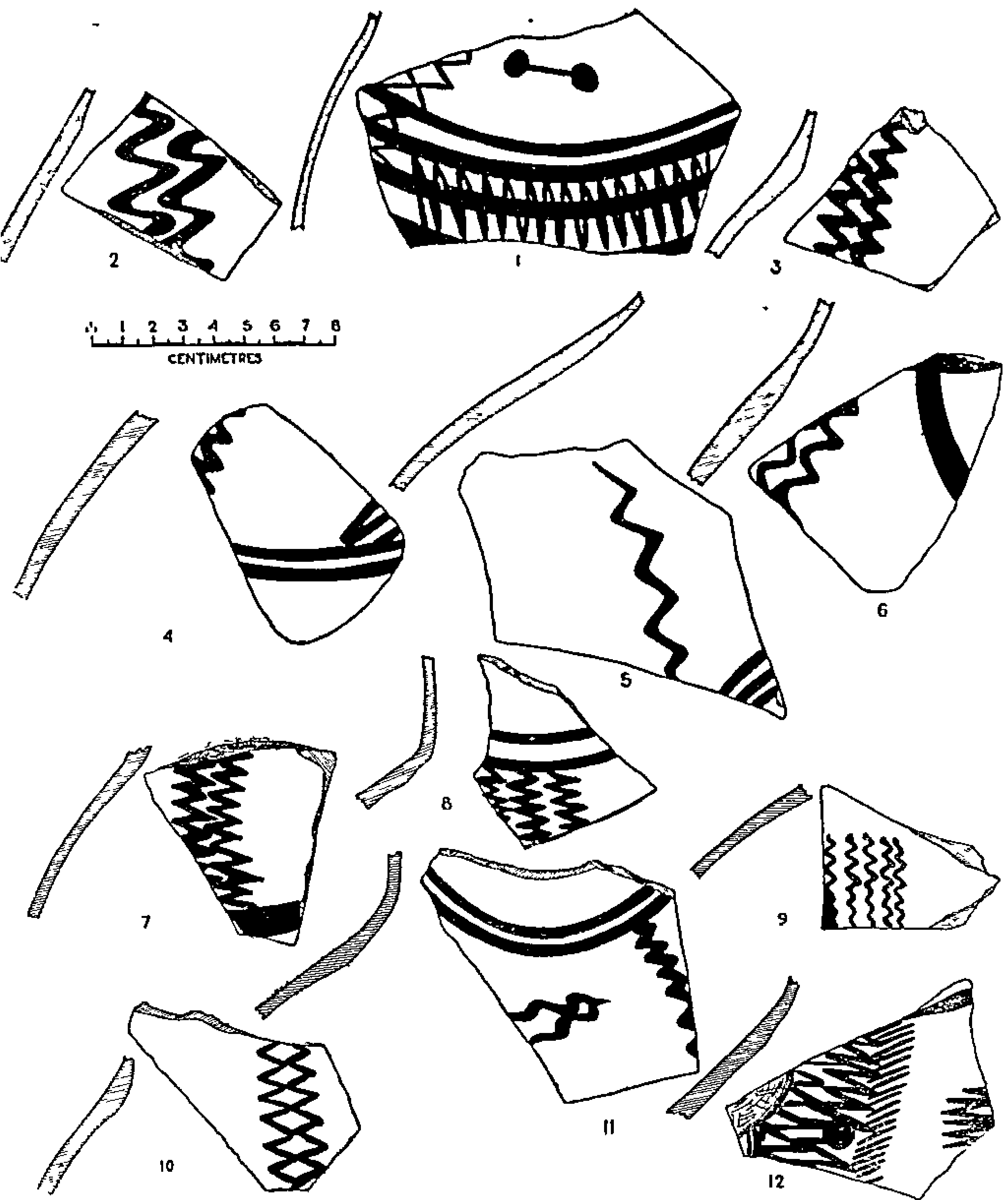


Fig 81 Zigzag, wavy lines (1-12)

(See p. 176)

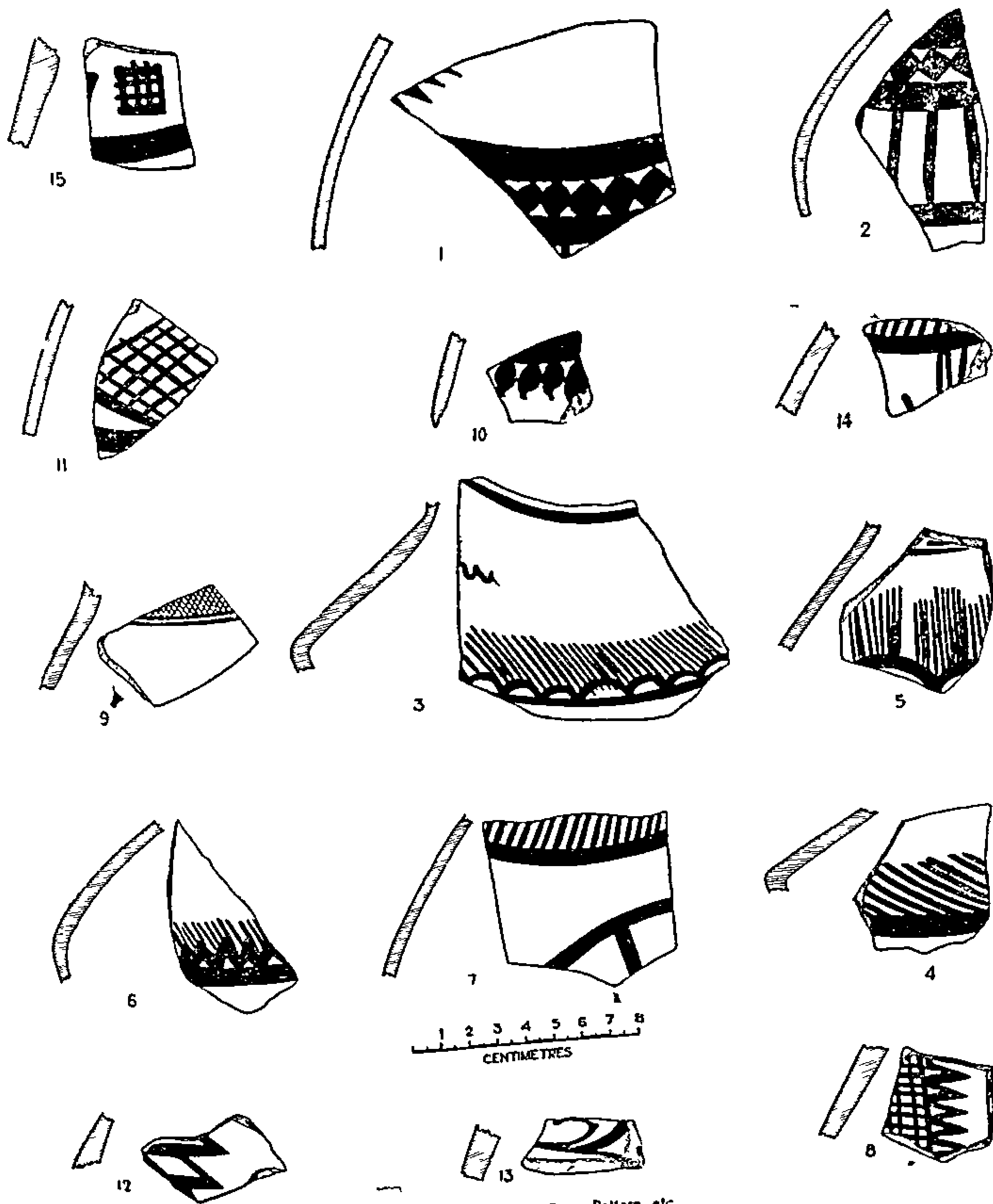


Fig 82 Solid Squares Grass Pattern etc
(See pp 176 77)

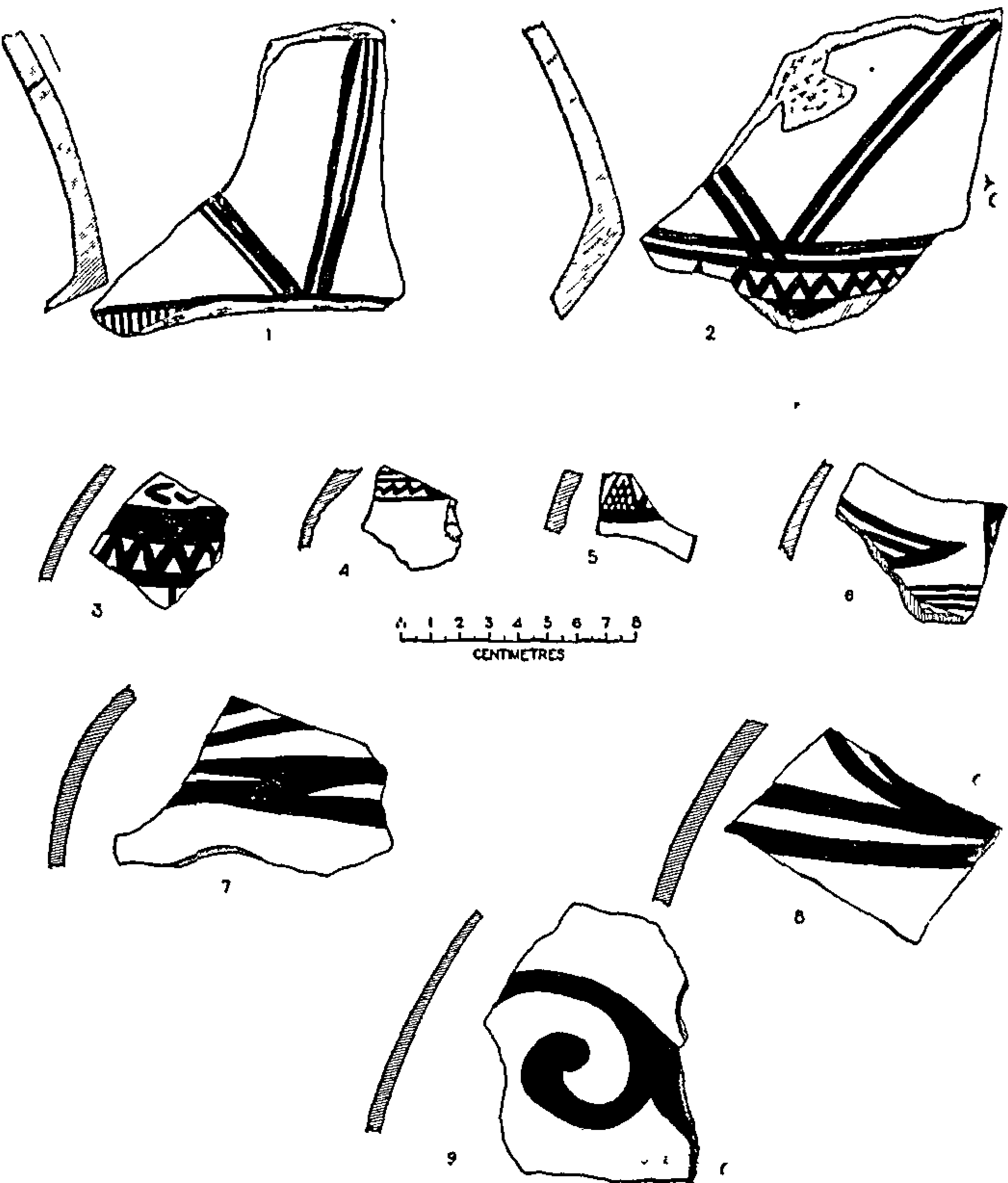
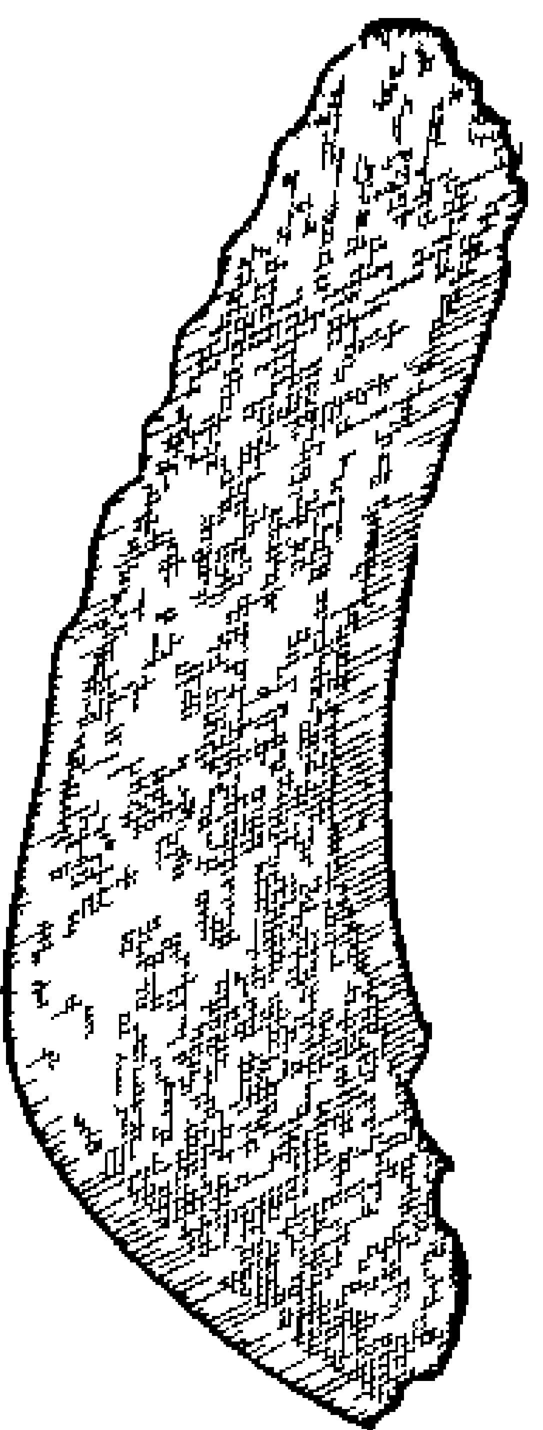
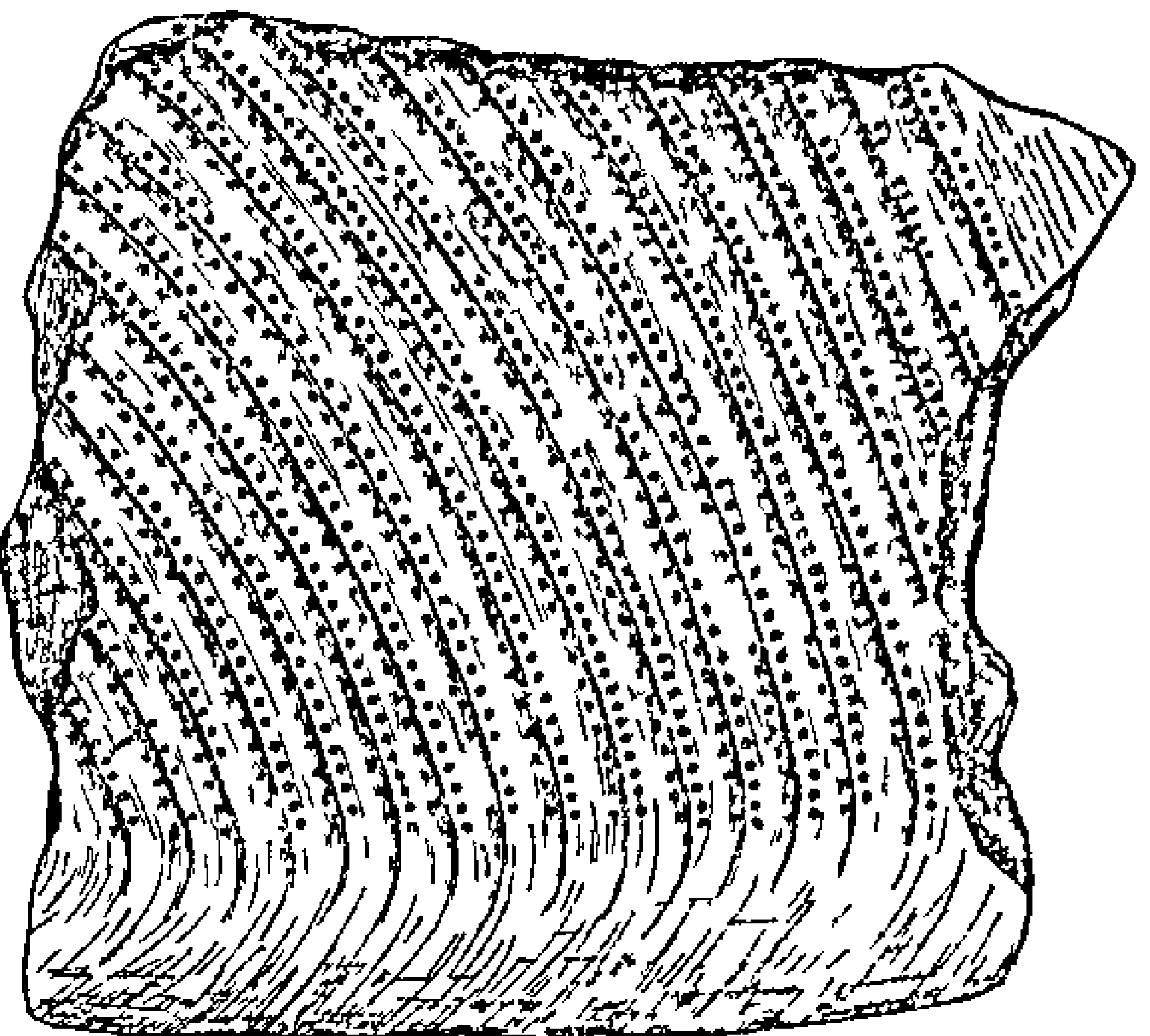
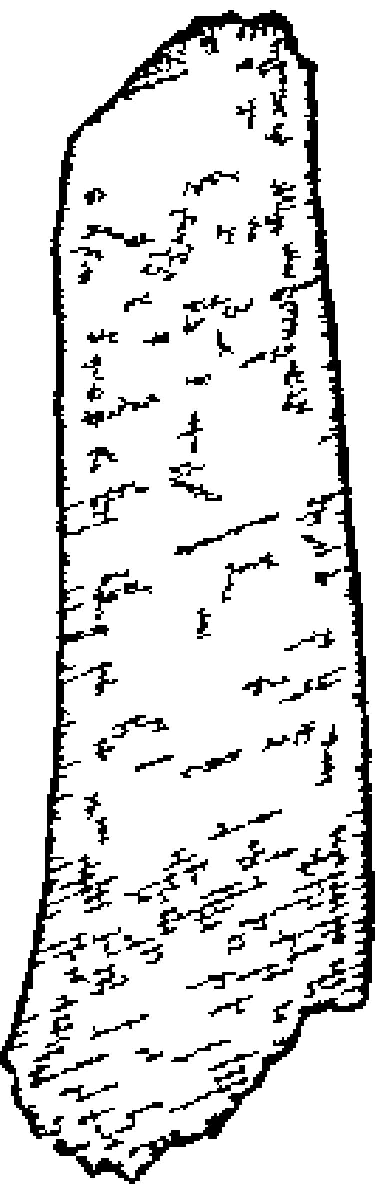


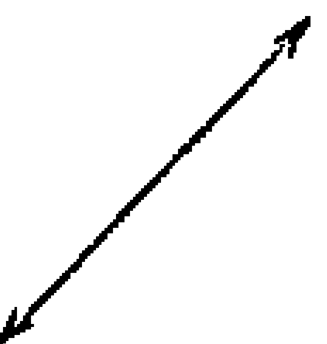
Fig 83 Miscellaneous Designs
(See p 177)

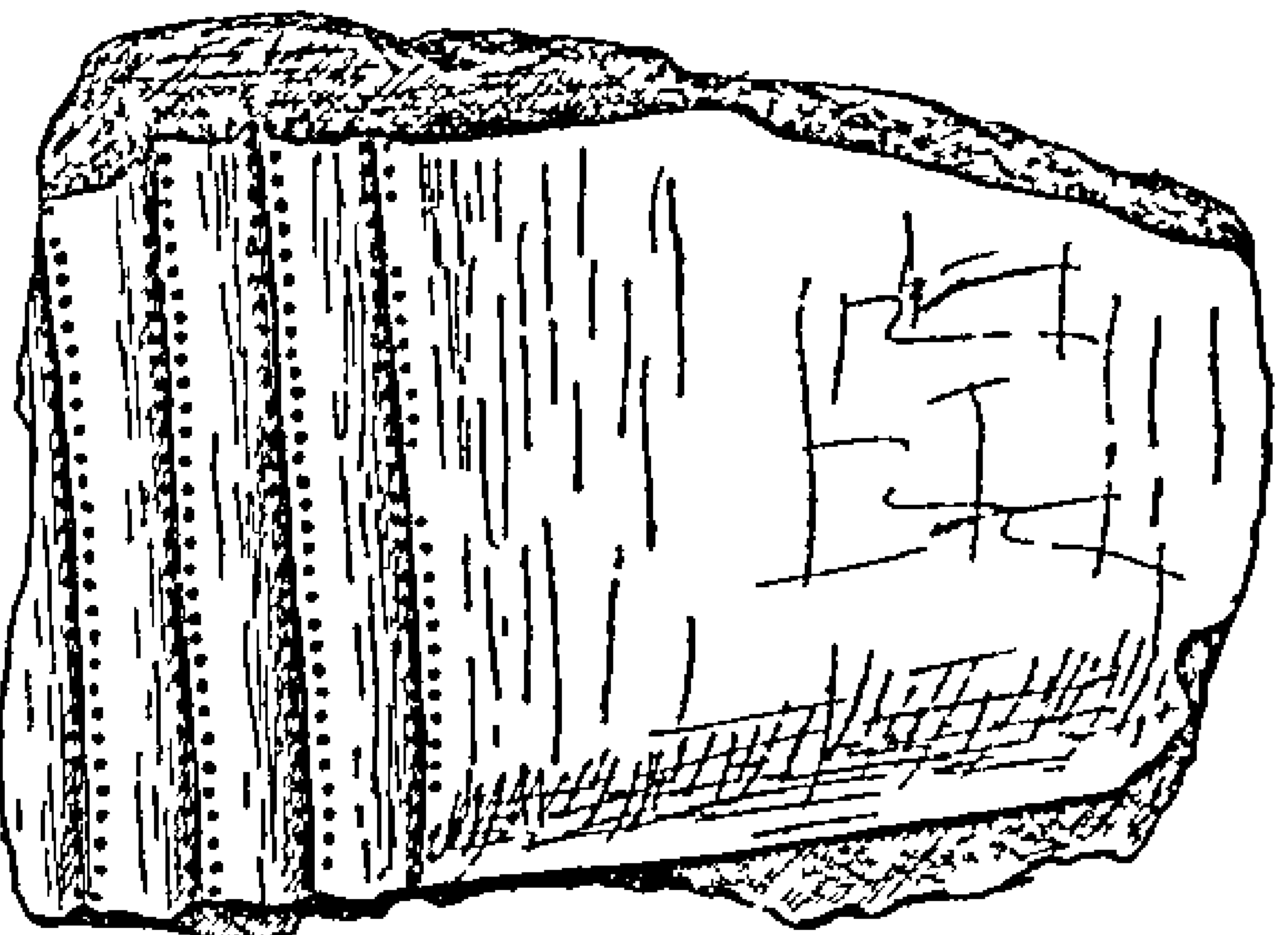




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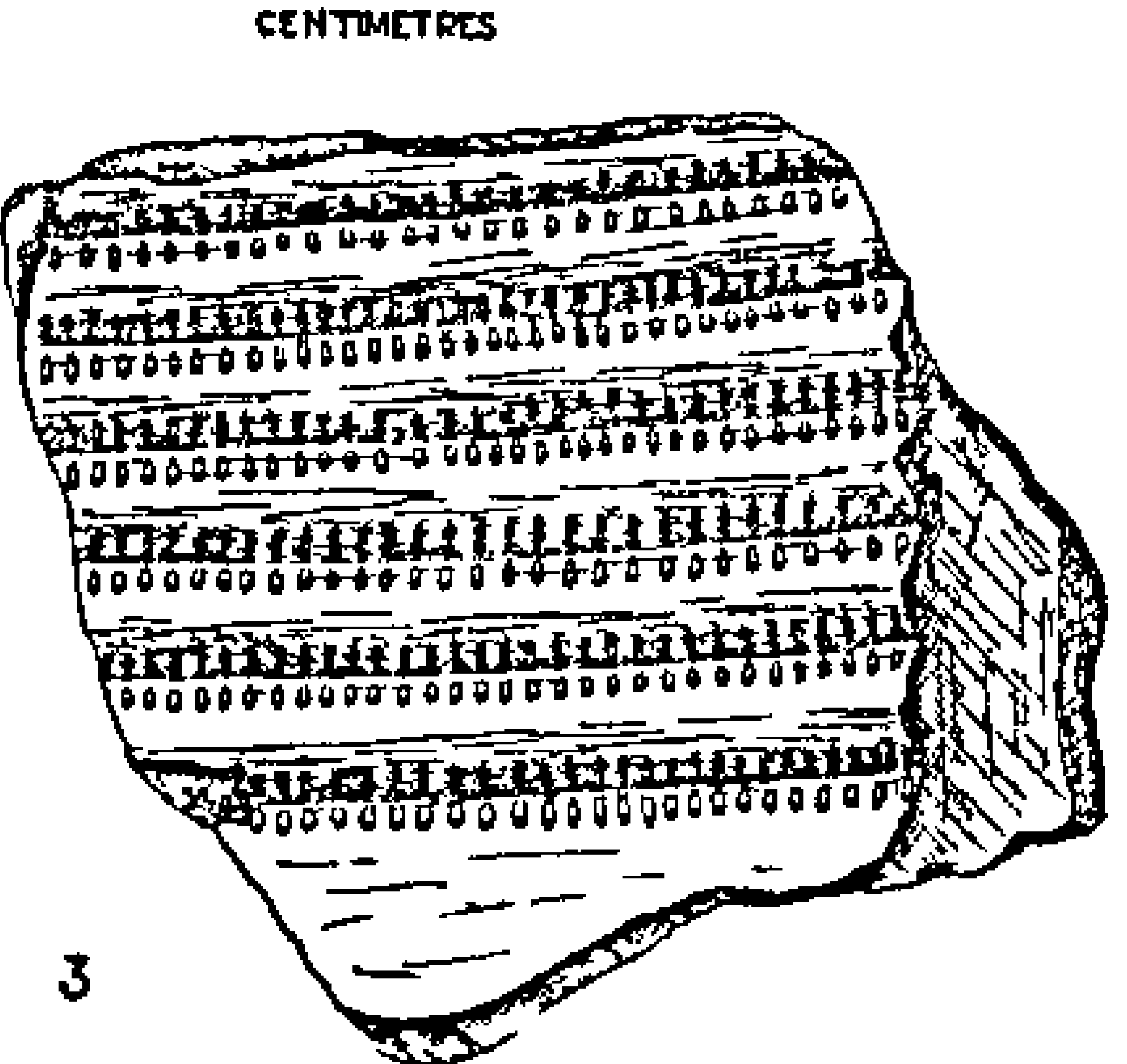




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Fg 84 Volutes and Incised (1 3)

(*See p 177*)

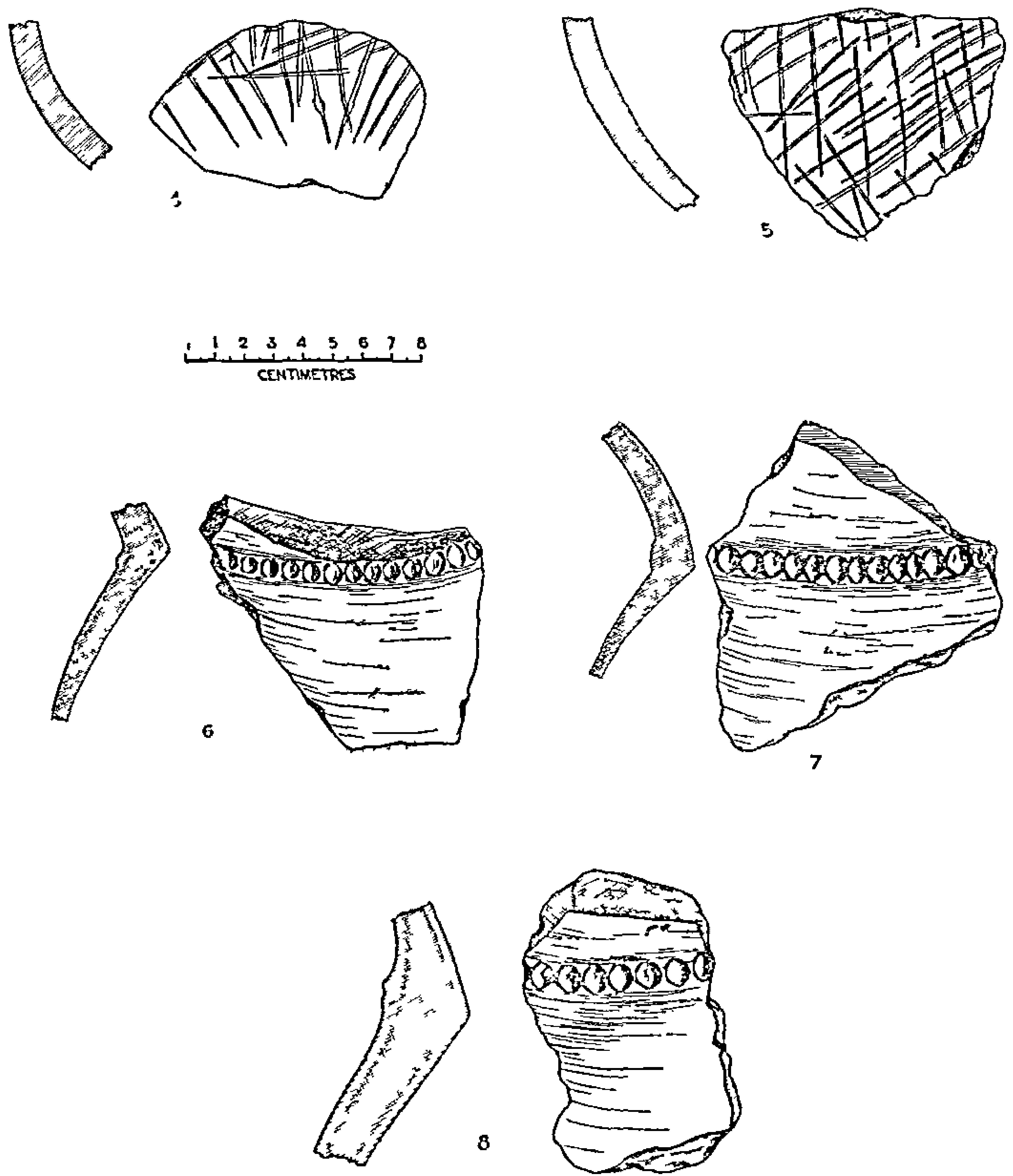


Fig 85 Scratched and Incised
(See pp 177 78)

5 (Jrw 3264) Details as in (Jrw 834) Interior soot blackened

6 (Jrw 409) Shoulder piece bluntly carinated vessel the design on brown red

7 (Jrw 3187) Probably shoulder piece globular pot, the design on red Probably handmade

8 (Jrw 3179) Small fragment the design on dark red background

9 (Jrw 636) Small sherd the design on yellowish red

10 (Jrw 2/315) Small sherd the design on red

11 (Jrw 2/3157) Sherd the design yellowish red

12 (Jrw 940) Sherd the design on brown red

13 (Jrw 1/342) Sherd the design on orange coloured background

14 (Jrw 1/40) Sherd the design on red

15 (Jrw 827) Sherd the design on red

Fig 83 (*Miscellaneous Designs*)

1 (Jrw 1/20) Neck fragment globular vessel the design on yellowish red

2 (Jrw 1/364) Neck fragment globular vessel the design on pink red

3 (Jrw 1/339) Sherd the design on light yellowish red

4 (Jrw 1/72) Fragment of a very small toy vessel the design on very light orange coloured background Handmade

5 (Jrw 1/147) Sherd the design on deep red

6 (Jrw 2/3196) Sherd the design on deep red Hand made

7 (Jrw 781) Sherd the design on blackish red

8 (Jrw 1/18) Sherd the design on light red or tan

9 (Jrw 1293 and 129) Sherd the design on crimson

Figs 84 85 (*Decorated Sherds*)

1 (Jrw 3323) Fragment of a large thick walled storage jar of coarse grained black ware hard baked very thick brick red slip externally decorated with a series of relieved concentric rings bearing pierced holes along the slopes The ornament in this and the two following is fashioned out of the slip and vessels are handmade

2 (Jrw 3328) Neck fragment of a large thick walled storage jar fabric etc as in 3323 Externally decorated with groups of relieved vertical ridges pierced along the slopes with tiny holes

3 (Jrw 606) Sherd of a large thick walled jar of coarse grained grey ware fabric etc as above On the outside relieved horizontal ridges pierced along the slopes with tiny holes

4 (Jrw 2576) Sherd of a pot made of two different pastes—tan and black—of medium fabric Unslipped but the surfaces are smooth The black outer surface is decorated with deep criss cross linear incisions. Wheel turned

5 (Jrw 2466) Sherd of a pot of medium grained tan burning black ware hard baked covered with a thick tan slip inside The outside surface is natural and rough and is decorated with deep criss cross oblique lines suggesting basket work pattern Probably handmade

6,7,8 (Jrw 1331, 1342, 2019) Decoration as in vessels shown in Figs 71 72

Jorwe has also given a fairly large sized (over 6″ in height) tiered or double pot (pl XXXV 3) It has a flat but narrow bottom, bulging belly with carination, incurved sides, and slightly flaring rim This supports a vessel over it which has a rounded base, sharply incurved body, and flaring neck with a groove The vessel is greyish-brown in colour and rather coarse in texture

VIII

Bead

Only one bead was found It is of smoky chalcedony of long tubular shape with the outer surface well-polished Length 21 mm , diameter 5 mm JrW I